

PCREVIEW

THE COMPLETE GUIDE TO PC LEISURE

1997

NEW YEAR RESOLUTIONS

1. LEARN A FOREIGN LANGUAGE
2. ORGANISE MY SOCIAL LIFE
3. GET ON TO THE INTERNET
4. RETOUCH MY OLD PHOTOS
5. START PROGRAMMING
6. MANAGE MY ACCOUNTS BETTER
7. CREATE SOME 3D ART
8. SMARTEN UP MY LETTERS
9. BEAT THE STOCK MARKET
10. MAKE SOME MUSIC.

January 1997 • £4.99 • CD version

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**Make him jump
through hoops
without upsetting
the RSPCA.**



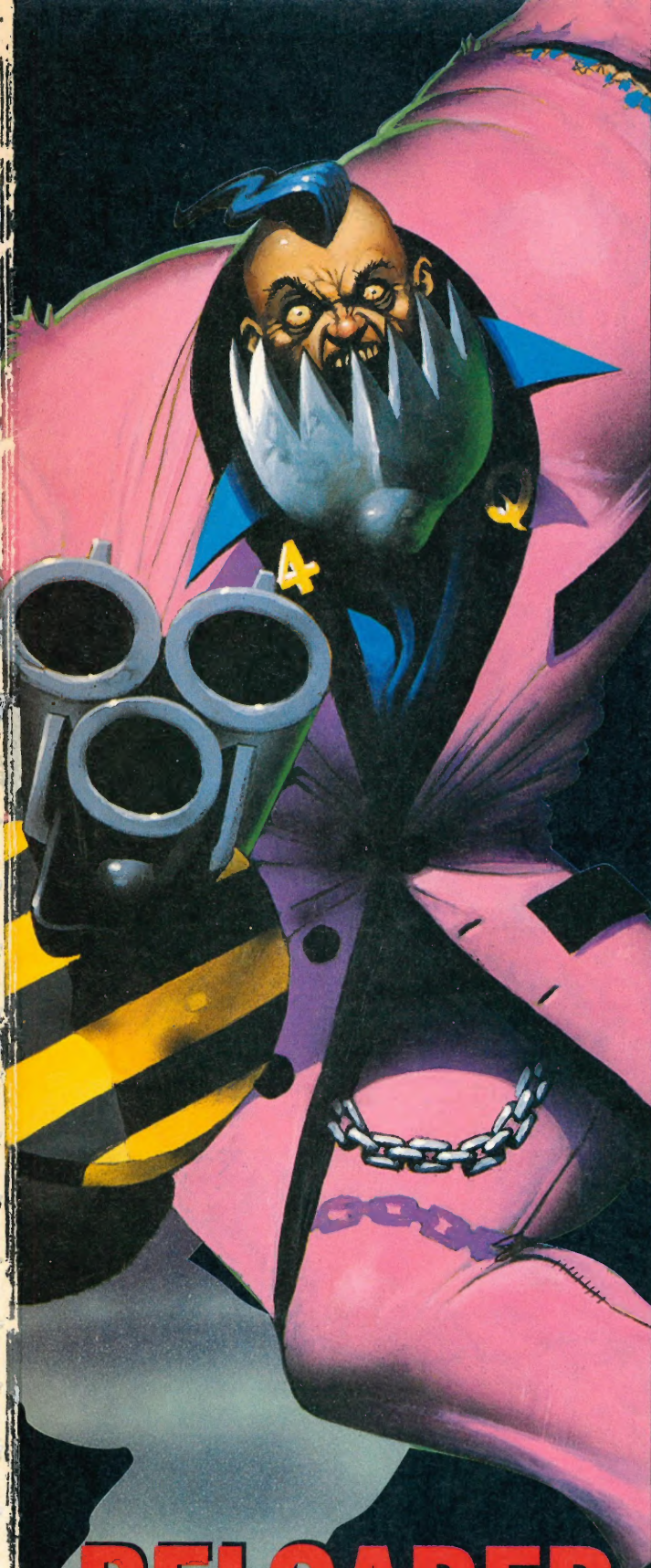
Sonic the Hedgehog from Sega is now on PC CD-ROM.



The excuse you've been waiting for.

Sonic CD is available from Electronics Boutique, Game, HMV, PC World, Toys 'R' Us, Virgin & other major software stockists. A supersonic price at only £29.99.
Web site: <http://www.sega-europe.com> Minimum hardware requirements: Pentium® 75MHz and Windows '95. SEGA, Sonic the Hedgehog and all related characters and indicia are trademarks of SEGA ENTERPRISES, LTD.

This month...



RELOADED

The action-packed Playstation game Loaded never made it out for the PC. However, its sequel, which promises to be even better than the original, will be on our screens in a couple of months' time. We preview this wild shoot-'em-up and profile its psychotic characters, who were designed by the boys from 2000AD comics. Meanwhile, over on page 7, we interview the game's head designer.

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Which CD-ROM Drive?

With a speedier CD-ROM drive your multimedia and games will load faster, and full-motion video will run more smoothly. But best of all, you can say, "Yeah, she's a scorcher isn't she? 12-speeder, since you're asking..."

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The Year in REVIEW

True, we weren't wearing flares and our hair was the same length as usual, but something made 1996 a little bit special. Find out what, taking in all 12 months' PC capers on the way.

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The year ahead

Having gazed fondly back on the year 1996, now we squint as boldly as possible at 1997. Read this article and you'll know everything that's going to happen in the PC world this year. As for us, we're off down the bookies...

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Where in the world?

Atlases are prime targets for the multimedia makeover. They're big, packed with pictures and desperately in need of a zoom function. We pick the best of three new world atlases (plus one made just for Britain) and wonder about our summer holidays.

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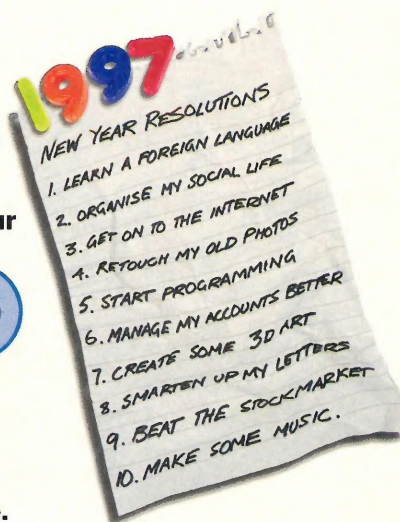
Food, Glorious Food

One day everyone will spend their time on-line, eating only pizzas ordered via the Internet. But until that day, there's a veritable smorgasbord of top nosh around, and we've found the CD-ROMs and Net sites that add a special flavour. Pass the dauphine noires...

10 NEW YEAR RESOLUTIONS

You bought your PC to make your life better. You were going to be on-line and organised, but you never got past Civ II. Ring in the changes with our huge guide to doing everything you promised when you first bought your PC. Learn a language, fix your accounts, make music and more.

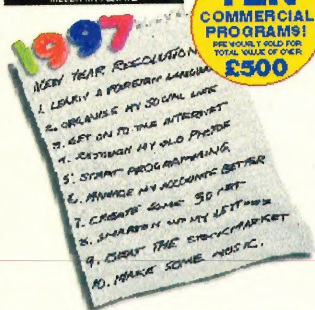
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CD REVIEW

TEN
COMMERCIAL
PROGRAMS!
THE TOTAL VALUE OF OVER
£500



Massive, playable demo of the top RPG.

This month on CD REVIEW...

Player

Get the cream of the demos each month with CD REVIEW. This time we've got the massive *Daggerfall*, the violent *Virtua Cop*, the 3D blitzkrieg that is *Alien Trilogy* and the air war that is *JetFighter III*. Plus, a multimedia guide to *SandWarriors*.

The Works

A stunning ten fully-working commercial programs this month, to tie in with our lead feature. Try out *Turnpike*, *Imagine 4.0*, *Evolution MIDI*, *Moneybox 4.1* and six others!

Multimedia

Three exclusive demos. Check out the *Interactive Atlas of Great Britain*, enjoy the festive fun that is the *Creatures Christmas Pack* and simply marvel at *Picasso*.

Pic'n'Mix

A selection of three pieces of comms software, just for you.

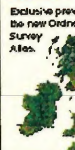
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Open up the disc label booklet for a quick reference guide to the controls for the games on CD REVIEW. Turn to page 125 for your five-page guide to using the disc, including projects, hints, tips and more.

ODDBALLZ



US ATLAS



CREATURES' XMAS KIT



PICASSO



PLUS: *Virtua Cop*, *JetFighter 3*, *Alien Trilogy*, *The Magician* and much more!

EASY FIND

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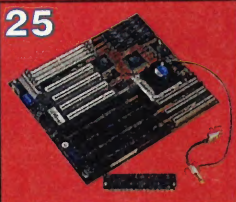
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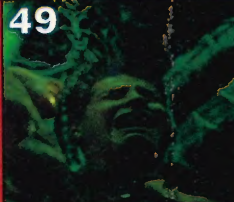
Gates Speaks

The Microsoft chairman has seen the future of the PC and he's in it. We listen to Bill Gates' predictions for the PCs of tomorrow.



PCR Handbook

Can you tell the difference between your mother and your motherboard? Our new guide gets under the bonnet of your PC, giving you the knowledge you need to keep running.



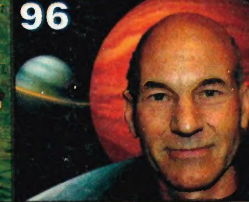
Realms of the Haunting

Well over two years in the making, Gremlin's first-person adventure promises terrifying storytelling and an immersive atmosphere. We sneak up to it and say 'boo'.



Game Guides: Syndicate Wars and Tomb Raider

We bought Lara Croft a top lunch, she told us how to beat *Tomb Raider*. Plus our *Syndicate Wars* guide concludes.



Planetoids and Particles

The PC REVIEW telescope is trained on Palladium's *Nine Worlds*, and then *Challenge of the Universe* goes under the microscope. Can your brain take the strain?



Better graphics

Most of the best new games are in 3D and the latest crop of dedicated 3D graphics cards can really make them shine. We pick out two of the best and rate them.



Boom Boxes

Get better sounds from your PC. If you've seen those Vitara jeeps that rumble up and down the High Street, blasting drum & bass and scaring Yardies, you'll understand what we're looking for.



How to... Keep a Secret

We brought the best agents from the world's finest clandestine organisations to the PC REVIEW offices, and they refused to talk. So we looked elsewhere...



How to... Buy PC Stuff Cheap

Forget the Del Trotter treatment. How to get computer kit for less, with not a box of dodgy gear from the back of someone's taxless van in sight.



How to... Bring your PC Back from the Brink

Your PC's had a critical failure. Its last words concern an arcane error code and a phone number in Seattle. Would you know what to do?

REGULARS

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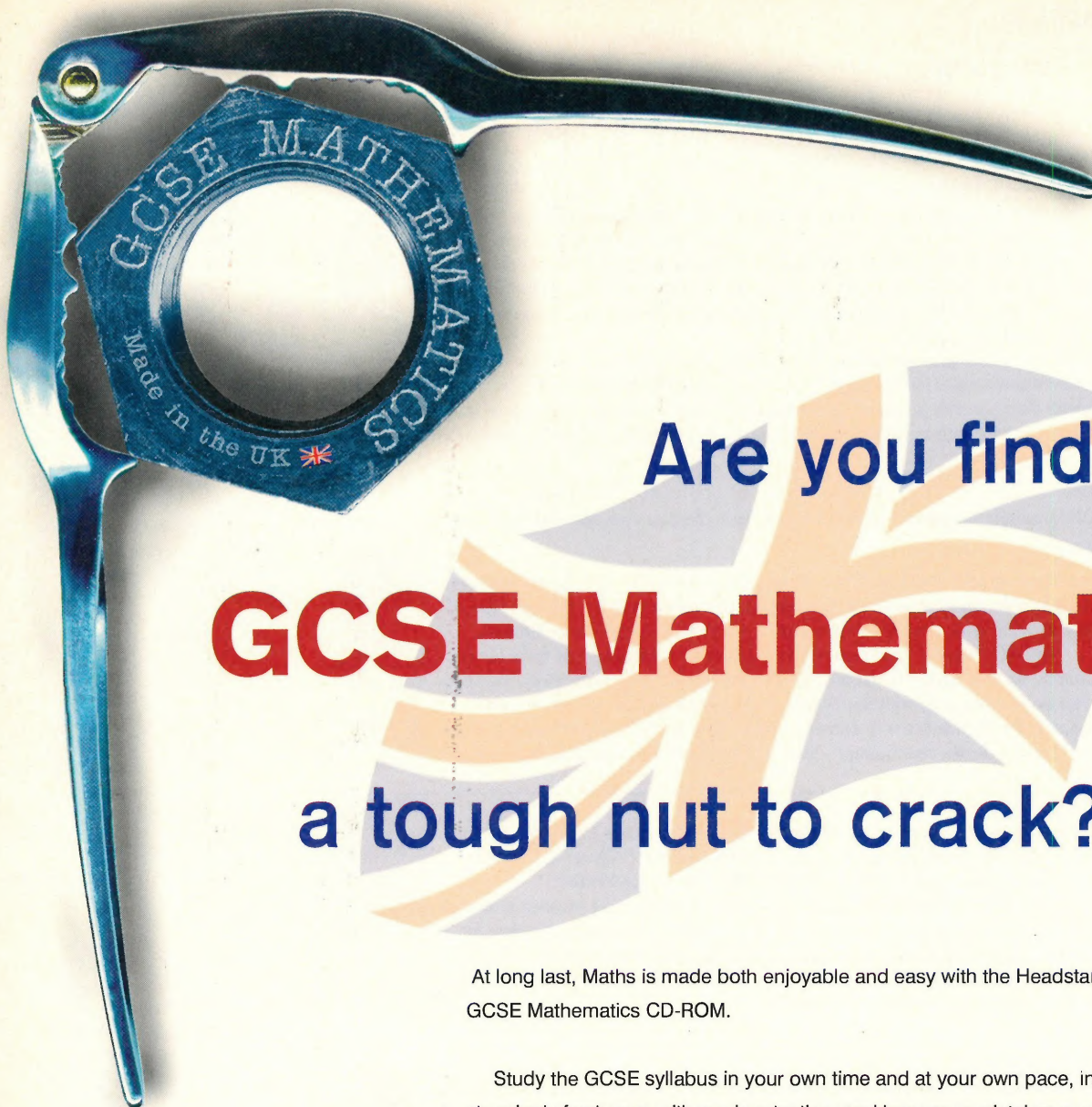
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Four atlases, plus 6 more titles including *The Magician*, *Nine Worlds* and *Worlds of the Reef*.

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Are you finding **GCSE Mathematics** a tough nut to crack?

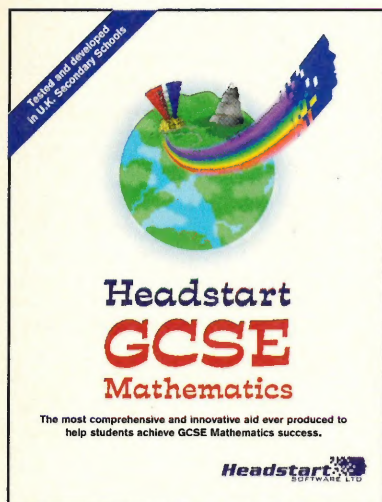
At long last, Maths is made both enjoyable and easy with the Headstart GCSE Mathematics CD-ROM.

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WELCOME

You can never have too many to do lists. Scrawled notes that always have as point Number One 'Write list'. That'll be underlined twice, and ticked so you can actually feel you're getting somewhere. And at this time of the new year, the planning frenzy goes beyond 'Get bike fixed' and 'Take in dry cleaning' and incorporates grander schemes and visions. Things like 'Learn a foreign language' and 'Manage my accounts better' creep up on you disguised as resolutions for the New Year, when really they're things you wish you could have started on all year.

This month we've written a list that you can get started on today, with a little help from your PC. The list also matches the most common reasons users cite for buying a PC. Here at PC REVIEW we understand that you want to do more with your computer than just play games, so we're giving you the knowledge and tools to do just that. Hope you enjoy the magazine, and look forward to seeing you next month with our Become a PC Expert Overnight issue.



YOUR COMPLETE GUIDE TO PC LEISURE

Welcome to the UK's most discerning PC magazine. Every month PC Review brings you...



NEWS

Bill Gates talked a lot about the future of PCs recently. We listened, and read between the lines. Plus the first Windows CE handheld PCs, the new Virtual World Wide Web, the BFI's video games archive and Stars! from Empire.

The PC industry is an exciting one, and we'll bring you that buzz every month. As well as the latest on games, multimedia and productivity, we keep you bang up-to-date with the ever-changing PC hardware scene. If a new soundcard or processor is causing excitement, you'll hear it here first. We're not scared of new technology – the kit you'll buy next year, explained today.



News editor
Owain
Bennallack
loves finding
Net VR.



PLAYER

Lose your wits to our Game of the Month, *Realms of the Haunting*, starting on page 49. Elsewhere, we light up the skies with *Jet Fighter III* and then limp home in a glider with Microsoft's *Flight Simulator Win95*.

We offer entertaining, detailed and stimulating games reviews that give you a feel for the games you want to buy. Our reviewers are experienced gamers who write with passion and authority. Also look out for behind-the-scenes reports from the hottest games studios as well as tips and in-depth solutions for hit games.



Games editor,
Mark
Ramshaw.
He knows
his stuff.



MULTIMEDIA

No-one knows more about foreign climes than us, after our trek through the *Encarta 97 World Atlas* and the other latest atlases. Then, we visit *Versailles 1685*, *The Worlds of the Reef* and Palladium's *Nine Worlds*.

There's more to entertainment than games, and that's where our multimedia section comes in. We pick out the very best of the latest CD-ROM releases and review them on the basis of how compelling their content is – we're not just impressed by fancy graphics, we're looking for real substance. Our multimedia reviews are the toughest in the business.



Multimedia
host Garrick
Webster...
still out in
Tibet.



THE WORKS

Don't blame your tools for your creative failings, blame your materials. We root out the best sources for new images and sounds, starting on page 99. We also tell you which new CD-ROM drive and speakers to buy.

The Works is where you come for the more serious side of computing. But we see no reason why dabbling with creativity software and producing your own graphics or music shouldn't be fun. The Works is also where you'll find our utility software, in-depth buyers guides, hardware projects and answers to our readers' problems.



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presides over
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CD Review

The finest cover disc you'll find on any PC mag – the slickest, most reliable front end, and the best exclusive game demos, productivity apps and multimedia software. Plus, this month we feature an amazing ten complete commercial products.



The PC Review charter

AUTHORITY: All the team call upon extensive experience in their fields.

HONESTY: We never allow corporate interests to obscure the truth.

VARIETY: Each month we select a mix of hardware and software.

DETAIL: We always check the facts – we never take a company's word for it!

VALUE: You are spending your own money – so price is always an issue.

QUALITY: We seek out the best and turn down dozens of products offered to us.



Our coveted Essential accolade is only given to the very best products – the things you can't live without.



An audience with...

ADE CARLESS

Meet the game designer from the darker side. Ade Carless, producer of Reloaded, answers the questions you want asked.

As computer games continue to appear in the mass media facing accusations of excessive sexism and violence we thought we'd drag a certain Ade Carless kicking and screaming into the limelight. Anyone who owns a Playstation or a Sega Saturn will already be familiar with *Loaded*, the grotesque shoot-'em-up he designed. A re-working of the arcade classic *Gauntlet*, *Loaded* added deranged, demented imagery and plenty of ketchup! And now it's time for a sequel. This time on PC. There were a few questions we wanted answered by Mr Carless.

Do you believe computer games have played any role in making society more violent?

No, I don't believe that for a second. All violent content in video games is over played to such an extent that it's rendered very surreal and cartoon-like. Almost all games seem to have some type of destruction or violence in them these days, maybe because that's what beguiles and entices folks to play them. It certainly seems to sell them. If folks don't like those types of games they shouldn't buy them.

There are plenty of non-violent alternatives available. There is room in the market for games such as *Reloaded* and as long as the violent element in computer games is continued to be handled responsibly and sensibly by the developers and publishers I see no harm (we are given certificates by ELSPA) in a little bit of escapism. Who wouldn't like to wade through a sea of fanatical adversaries soaking up pain and reflecting it back at ten times the magnification?

Violence has been around a lot longer than video games after all and I'm sure that everyone can tell the difference between the horrific and sobering footage shot in the Gulf and Bosnia and a quick network blast on *Reloaded*, *Quake* or *C&C*.

Do you ever question whether you're doing the right thing making games like Reloaded?

During the development of *Reloaded* a couple of scenes from the front-end pre-rendered sequences were dropped, it seemed the most responsible thing to do as they were considered a little too shocking. As I said before the violence in *Reloaded* is nothing but escapism, if it were more realistic then I think I would have questioned myself a lot more about the value of the product in moral terms. People seem to enjoy this type of game, and who are we to argue?

Why did the original Loaded never make it out for the PC?

Loaded never made it to the PC as we didn't feel we could do the lighting effects justice with the technology of the time. Well that's not strictly true, we had fast PCs but I don't think they were widely established amongst the punters to make it worthwhile. Also I think that the PC market may be shifting a little toward the arcades. Strategy and simulations have been around for ages and will continue to be around for more ages but there is room alongside them for simpler action games.



Carless. Used to work in an abattoir.

What stage do you feel PC games have reached in their evolution?

There is still plenty of scope for ground breaking new ideas but I think that they are inevitably becoming less and less frequent due to a couple of factors. In the beginning there was a great flurry of originality and innovation. A thousand bedroom industries sprang up and enthusiasts worked long, thankless hours on their own labours of love. These days some companies seem to be a little more reluctant to try something new, primarily because of the growing string of noughts on the end of development costs. We still try to make different games at Gremlin – look at *Normality* and *Roth* for instance, both are a departure from the usual point and click and use new and existing technology in interesting ways. This is a tiny example of the enormous potential that the machine has.

Games are still in their toddling dribbling infancy. The PC has the most diverse number of input devices for it – mouse, keyboard, joystick – the most flexible hardware configuration, a hoard of enthusiastic and creative people trying to make games that they would like to play so as the games business approaches its coming of age things can only get better...

Why did you feel it was necessary to get some interaction with non-player characters into the Reloaded?

They are there to provide a little break in the blastfest tempo of the game and also to furnish the players with a couple of clues as to what their next objective might be, sometimes this role is played by signs within the game. One of the main criticisms of the original *Loaded* was that there was no pause for thought during play. By giving the players clues we have been able to hang a slight puzzle element in there. The player still solves many of these puzzles with their gun muzzles but it is a bit of a change.

The storyline for Reloaded is a bit rubbish isn't it? Where did you get the inspiration for the twisted world of the game?

Erm, I suppose it is a bit rubbish. Maybe reams and reams of plot and characterization of the baddies would have helped a little more but essentially the game is a ridiculous shoot-'em-up and there isn't much need for a plot. The inspiration for it came from reading too many comics and playing too many shoot-'em-ups I suppose.

Now, we've got the moral crusading out of the way, what's the most grotesque way to die in Reloaded?

Ending your days as a large pile of inside out person I suppose. I've only met one person who wanted to be turned inside out and he was inside out.

And what's your favourite weapon in the game?

I've always liked flamethrowers for some reason. Once you have fired it at something highly flammable it has an unpredictable life of its own. My favourite weapons in the game are Cap N Hands' antique ballistas. My family had a cigarette lighter the same shape in the mid-70s, I thought it was an antique but I was sadly deluded by my parents.

Without giving away the secret what's the most fiendish puzzle in Reloaded?

One of the most difficult puzzles to complete is one where you have to coax the sonic Warrior Monks to break their crystal obelisks for you, before pushing the broken end of it into a hole miles away in order to raise a ramp to get over a wall.

Any hope of another sequel for Reloaded? Or perhaps doing a Special Edition of the original game now the engine is all running fine and dandy on PC?

There is indeed a sequel to *Reloaded*, it is underway as we speak and has been further refined. Characters are also now able to use vehicles and stuff and we have remembered to put a jump button in this time. I don't think there are any plans to redo the original at the time of writing.

GET LOADED YOURSELF!

Reloaded isn't even ready for review yet – it should make it into our March issue. Gremlin, however, has consented to offer 10 lucky readers a chance to win a copy of the game. All you have to do to enter is read our *Reloaded* preview on page 46 and write on a postcard the name of the artist who designed the cartoon characters in the game. Answers by February 15, 1997, please. First 10 out of the hat on the closing date wins a prize. Send the postcard to:

I want to get Loaded!, PC REVIEW, Future Publishing, 30 Monmouth Street, Bath, BA1 2DL.



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NEWS

GATES SPEAKS

The New Year message from the Microsoft Chairman

PLAYER IN BRIEF

Flying Low

According to The Daily Telegraph, one of the lead programmers of *SimCopter* has been fired. His crime? Burying buffed-up muscle men deep in the game's code, that allegedly emerge on key dates of the years. The programmer claimed it was a protest against the preponderance of scantily-clad females in PC games. If you find any in the game, get a screenshot and send it in.



Sail Away

Empire's new real-time strategy game *Age of Sail* promises everything for the budding Admiral, from single ship encounters through squadron actions, right up to Trafalgar-like full fleet battles. You can play both historical encounters or take part in extended campaign games. All that's missing are the rats! *Age of Sail* is out now, at £44.99.

More Pinball

Another new pinball game from the wizards at Twenty First Entertainment. *Slamtilt* has four tables loaded with sub-games and animations. But what makes it really different is its extended display panel, which adds video game action on top of the furious ball-bouncing gameplay.

Settle It

Blue Byte is set to release a mission pack for *Settlers II*, its best-selling god game. As well as nine extra maps, that span the globe from North America to Asia, it also includes a map editor so you can make your own. It should be out by February.

Blizzard Besieged

Blizzard must be anxious to release *Diablo* if the excitement it's mustering on the Internet is anything to go by. The Californian company recently offered Net gamers 1000 places for Beta testing, and all were gone within 3 minutes. Over the next few hours, the Blizzard server received more than a quarter of a million hits from fans, many of whom had stayed up waiting all night.



When you sit down in front of the PC of tomorrow it will be able to recognise you. It will be able to see you, hear you and respond to you. And, it will be running Microsoft's Active Desktop.

This is the latest futuristic vision of Bill Gates, Chairman of Microsoft. He claims the market will continue to flourish, with desktop machines becoming both more powerful and human at the same time. PC communications will feel increasingly natural and, no surprises, the Internet will also take an increasingly dominant role.

"We'll look back and say 'Hey, those computers couldn't listen, couldn't talk, couldn't see,'" Gates told an excited audience at the Comdex show held in Las Vegas last month. "Yes, the operating system will still have a file manager and a multi-tasking manager in it, but 90 per cent of the code will relate to these new input systems, the

tools that our kids will have to pursue their curiosity will be quite amazing."

Alongside his generally positive view for the PC, Gates did not spurn the opportunity to take a swipe at the predictions of other visionaries. In a thinly veiled attack on the champions of the network computer, who claim machines are set to become much simpler, with storage and possibly even processing power distributed across the Net, Gates said, "The various attempts to recentralise computing, to go back to the time-sharing days, all tie in to people who want to sell expensive servers. If you take cycles off the desktop and move them back to the centre, then you can have big expensive machines doing that work."

The vested interests

Railing against those with a vested interest in selling fat servers, Gates

doubted that network computers could offer anything to consumers. "By eliminating the disk, you can save a couple of hundred dollars," Gates admitted. "But if you're going to run a state-of-the-art browser, the memory size or processor, the screen, sound – all the things that are in the PC – are necessarily there". He also predicted that the Internet will become even more overloaded than it is already if network computers take off.

Barring handheld PCs and Web TVs (which Microsoft has commercial interests in), Gates argued there was no advantage in reducing the power of desktop PCs. Indeed, his aim was to make the machines increasingly powerful while hiding their complexity more effectively. What people really wanted was more reliable computers.

"We take millions of calls a year," he said. "And every one of those is logged into a database. Whenever we



"I've been using the Internet to learn about pregnancy."



With such big spectacles, no wonder he can see the future. Here are a few more sound-bites from the Gates' speech.

"I still read *The Economist* in print, *The Wall Street Journal* in print, the trade journals. Although I'm on their Web sites, so far there's no substitution effect."

"We could define a new type of return receipt mail that not only says it's been read, but also describes the reaction that somebody had to that mail!"

"I get mail all the time – every time my email address appears in an article. I feel sorry for the President of the United States, because I get copied on a lot of the messages that are sent to him. He probably has an even tougher time getting through his email than I do."

"*The Internet is everywhere. There's even a social phenomena where kids compete to see who's got the best connection.*"

"The PC doesn't even realise when you sit in front of it. We are working on programs that will even get to the point that the computer will recognise the mood you have."

What are Bill's words worth?

Microsoft's Chairman, did manage a nod in the direction of the underprivileged and those in the Third World. He pointed out the imbalance between those with access to computers and those without. "Given how great these tools are, and that not everyone is going to be able to have one at home, can we make them available to everyone?" asked Gates. And, backing up this sentiment, he recently donated \$1.1 million dollars to libraries and schools in Los Angeles, California.

"I see a time when children will be spending more time in front of a computer than they do watching television," Gates told a school class at the Los Angeles Central Library. "It will be neat seeing the interaction and I earning of new things – things that you want to learn about and then be able to discuss in school the next day."

Around half the donation, including software and technical assistance, will be split between the Los Angeles Central Library and a new virtual library at California's Mesa Learning Centre. The remainder goes to a Technology of Education program, run by the Los Angeles County Office, which makes teachers more computer literate. Interestingly, it's thought the bulk of his donation came from personal royalties on his best-selling book, *The Road Ahead*. The remainder was stumped up by Microsoft.

do a new product, we ask if we could design it in such a way that we'd get less calls."

Naturally, Bill Gates had plenty to say about the Internet. To begin with, he hinted that the latest Windows software drivers and upgrades might be automatically downloaded from central sites, without us even having to ask Windows to do so.

Behold the Active Desktop

The revolutionary effects of the Internet was changing the way our PCs worked right at the desktop level. Microsoft intends to merge the way we find files, mail messages and even Web Pages.

"The Internet has allowed us to step back and do things in a better way," he said. "We've moved from a file sharing world, where information is just too hard to find, into a world of pages."

Another Internet-inspired concept is the Active Desktop. "It's interesting to

think about what's the most important thing on the screen. Over the last decade, we've just used the computer screen to show a bunch of folder names. It's not dynamic, it doesn't change," said Gates. In contrast, the Active Desktop Microsoft proposes will ensure the most useful information is always at your fingertips.

The other big push will be towards handwriting, speech and visual recognition systems. "We have to tie these rich elements into the system and evangelise to every application developer. Even humans couldn't recognise speech unless they knew what the context was."

Gates entertained the audience with a talk in which one of the words was, fittingly, 'rich'. But Gates wasn't referring to his personal wealth. Rather, he was trying to emphasise how future Microsoft technologies will enrich your use of both PCs and the Internet. (OB)

NET REWARDS

Big names push for the popular market

The continuing popularity of the Internet is encouraging larger, non-specialist players to enter the on-line games market.

Virgin, for instance, has just launched a new Internet service, while British Telecom is pushing both BT Internet and Wireplay, its multiplayer service. Richard Branson's Virgin, which has previously revolutionised industries as disparate as Air travel and Personal Finances, claims its mission is to make the Net easier for everyone to use. In reality, the Virgin brand name will probably attract as many Net newcomers as any services on offer. "Virgin Net is about getting more out of life," said Richard Branson, Virgin Chairman. Subscribers get 3 months unlimited access, followed by a charge of £10 a month, again for unlimited access.

BT, meanwhile, hopes to leverage its household name across the Net. "With BT Internet, there's no messing about with confusing manuals," said Raj Kanthan, product manager for BT. "You just slot a CD into a computer and away you go." For £150 a year, you get unlimited access, 2.5 Mb for your own home page and up to five email addresses.

BT is also trying to popularise its Wireplay service. "We always knew that UK gamers were eager for the opportunity to meet up and play against one

another," said Colin Duffy, BT's Head of Games. WirePlay is a front-end server for multi-player gaming, that introduces modern gamers to one another and facilitates their two-player gaming. In its first month, more than 50,000 people tried the service, with more than 7,000 of them choosing to sign up. Wireplay costs 6p a minute peak-time, 2.5p off-peak, and comes with a free Wireplay Edition of EF2000.

Interestingly, a new survey from Key Note pours cold water on the Internet myth. By the end of 1996, only three per cent of UK homes were connected to the Internet as compared to 14 in the US. The survey acknowledges an upward growth in the Net's popularity, saying by 2000, 12 per cent of UK homes will be on-line.



BT Internet: It's good to type.



Unlike in the US, where Net use is widespread, Wireplay is the UK's only dedicated Net gaming service.

FIRST LOOK AT ARMoured FIST 2

A picture can't really demonstrate what makes *Armoured Fist 2* so beautiful. NovaLogic's voxel space mapping has the clouds in the sky while metallic tanks trundle past below. The gameplay has also been overhauled, with tanks based on General Dynamics' latest designs and realistic enemies who fight to the rulebook. More soon. Meanwhile, for a look at the original *Armoured Fist*, turn to Reissues on page 78.





MULTIMEDIA IN BRIEF

Fourteen Weddings

With typical fun loving tabloid wit, VCI software has come up with *Fourteen Weddings and a Divorce*. This CD-ROM profile of Britain's internationally loved royal family features 60 majestic video clips and over 600 photos. Dubbed a romantic history of the House of Windsor, it sells for £29.99

Musical Reference

Helicon Publishing and BBC Music Magazine have teamed up to produce the *Hutchinson Encyclopedia of Music* on CD-ROM. Aside from an 11,000 entry reference work, the disc includes 200 orchestral recordings, 3000 operas and 1000 recommended works by composers. It costs £39.99 from Koch.

Grolier Woos Women

Ladies should look out for two new CDs just for them and brought to the market by Grolier Interactive, the same people who published *Picasso*, reviewed last month. The first disc is entitled *Karen Mulder* and was designed with the help of the top model by the same name. It features chapters on make-up, nutrition, body care and so on. The second disc is the *Elle Beauty Guide* has sections on knowing your skin and choosing perfume. Both sell at £39.99.

RockBase V2

Fans of musical databases, rejoice, for *RockBase Plus V2* is now available for Windows. Inside are listings of 337,000 albums and singles from some 43,000 artists around the world. It costs £34 from Channel Market Makers.

Lost Animals

No, not a disc that helps you find your pets. And it's not from the RSPCA either. *Lost Animals* instead focuses on extinct species. Exploring the fate of 50 animal species that have become extinct this century, the CD-ROM ties in with the *Lost Animals* series broadcast on Channel 4. The disc was produced by Ransom, the same people who did *Worlds of the Reef*, reviewed on page 95.



Has anyone lost a deer recently? Mother nature, apparently, lost this one.

HIGH STREET WAR

Big chains charged with hurting the games industry

High street electrical stores like Dixons are under attack from software publishers and distributors. After a controversial summer, in which the multiple outlet chains were blamed for fuelling a price war, they are now also accused of breaking game release dates.

Distributors generally give chains stock several days before the stated release date, enabling them to fill the shelves. Unfortunately, the local branches often sell games as soon as they arrive. This hurts smaller, independent computer games stores which don't usually receive stock until the day of release. Without the indies, consumer choice is damaged.

One publisher, Virgin, is so frustrated that it has threatened to withhold stock. In addition, the Network buying group, which represents smaller retailers, has written to the Office of Fair Trading in an attempt to halt the practice. Retail discounting began with *Quake* in

October. Possibly the most hyped PC title ever, *Quake* was instantly sold at up to £20 less than its RRP. It was a similar story with Microprose's *F1GP2* and, most recently, Virgin's *Red Alert*. Many claim that such discounting benefits no-one, because it destroys profitability and thus damages the games industry as a whole. However, others argue that even artificially cheaper games will result in a high-volume market, which will enable more of us to buy more games cheaper.

Ironically, the whole system of buying games could be ending anyway. Gamester Multimedia will launch its games rental system in February. For £20, you get a hardware card that slots into your PC enabling you to run the rented games. Once the rental charge exceeds the RRP, the game is yours to keep. Psygnosis, Europress and Ocean are all reportedly interested in the scheme, with over 400 retailers so far each stumping cash needed to manage the system.



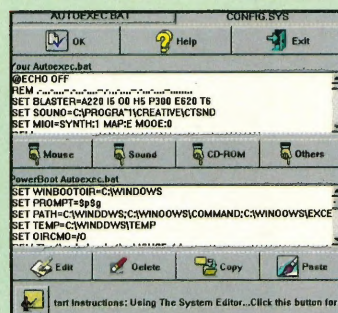
High street stores are accused of selling games too cheaply and too quickly. But why should we complain?

BORN TO RUN

Running old DOS games under Windows 95 can, as you probably know, be a real pain. Even if you're a newcomer to the world of PCs, the increasing popularity of budget labels means everyone will most likely have to try coping with the dreaded DOS prompt at some stage. For those of us with libraries of much-loved older games, it's a constant threat.

True, with a bit of technical knowledge these problems are easily overcome. For newer users – mainly those who have only experienced Windows 95 – Twenty First Century's *Power2Play* might be a good bet. It's a game launcher which enables you to start-up DOS games from Windows 95. It comes ready to run dozens of games (of course, you must already own the original) and you can also manually add your own. It comes packaged with shareware versions of several games, including *Duke Nukem 3D*.

Power2Play will even setup DOS shortcuts for your favourites. It will be released at the end of the month, priced £19.99.



Run old DOS games without having to type any commands, using Twenty First Century's *Power2Play*.

Won! Won! Won! Competition winners

Remember our Star Micronics Competition? We asked: "What boffin of yore invented the world's first printing machine to utilise movable type?". The answer was, of course, Johannes Gutenberg. In third place, Colin Beale of Staplehurst gets a LC-240. In second place secures Gus McTieman an SJ-144. And in first place, Martin Underwood, bags the WinType 800C. You might also recall the *Pro Pinball* compo in May. The results have been fed into the special cheat detector and we've finally found a clear winner. With a whopping 794, 697, 200 points, PC REVIEW reader Matthew Horsman of Cornwall bags the prize. A full size Star Wars table is trundling its way. In July, we offered you the chance to win yourself a Vauxhall Corsa. And Mr Graham of Lanarkshire promptly took it.

Each winning a pair of Virtual SimulEyes from hi-tech distributor Oregon are: Mr R. Shah, Dr M. Ashub, H. McMichael, Daniel Ward and Tim Illson. The fourth dimension was time. And finally, Daniel Helme of Plimlico has won himself a great new Philips CD-ROM writer by sending us in a copy of "Weihnachten Mit Dir" by Stefanie Hertel and Stefan Mross. Officially the worst record ever made by Man or German, even the melancholy of "Es wird scho glei dumpa" isn't enough to dampen our hysterics. "Weibst Du, Wieviel Sternlein stehen?" ask Stefanie and Stefan. We decline to answer.

HELLO BIG BOYS

New players push Windows CE for handheld PCs

Casio, Hewlett-Packard, Compaq and others unveiled a new family of PCs – Handheld PCs (HPCs) – at the recent Comdex show in Las Vegas. The tiny PC compatibles are based on Microsoft's new operating system, Windows CE.

Without prices or performance figures, it's difficult to see what will differentiate the various HPCs, but the extravagantly named Cassiopeia from Casio is the first to make it into our offices. It comes with a minimum of 2Mb of RAM, 4MB ROM, and uses a SH-3 RISC processor from Hitachi. Including touch-sensitive pen as well as a full QWERTY keyboard, we should see Cassiopeias in the shops by Summer.

Compaq is emphasising the HPC's role as a desktop extension, naming its new machine the PC Companion. The company has made alliances with several key vendors to provide extra bundled productivity apps with the Companion, including *Desktop to Go* from DataViz and *Mail on the Run!* from River Run Software.

Like the Cassiopeia, the Companion has a data stylus, or you can touch the screen with your finger. Again, it should be here by summer.

Meanwhile, the Palmtop PC from Hewlett Packard boasts the widest screen of all the CE

machines, at 80 columns wide. It won't arrive in the UK until Autumn.

"The introduction of the Handheld PC with Windows CE is a critical milestone in Microsoft's continuing strategy to bring the popularity of Windows to new information devices," said Bill Gates. Microsoft seems to be targeting Windows CE at a much broader market than just HPCs, including consumer appliances like mobile phones, Web TVs and even entertainment consoles. Gates hinted at this, adding "The broad support we are receiving from the industry provides the foundation on which we'll build future product categories." Elsewhere, Intel has just announced its Miniature Card-to-PC connectivity

solution, which is designed to improve data transfer from new media technologies to the PC, while Iomega, the company responsible for the revolutionary Zip drive, has announced a new portable storage medium called n.hand. Costing around £10, the tiny n.hand disks will be the size of a 50p piece and store up to 20MB of data each. Iomega vice-president Crawford Del Prete said, "The historically high cost of very small mobile storage has limited the market. This changes everything." At the least, n.hand could revolutionise the digital camera market, since a single disk will store up to 70-80 images.



Makers of replacement handheld PC styluses are rubbing their hands together.

COMMON GROUNDING

All the new Handheld PCs with Windows CE come equipped with five handheld versions of popular Microsoft applications. These include the following:

Information Manager – A fully featured personal organiser with Calendar, Address Book and Tasks. A companion program for Microsoft Schedule +.

Pocket Word – A stripped-down version of the popular desktop word-processor.

Pocket Excel – A fully-featured spreadsheet, for crunching data on the move.

Pocket Internet Explorer – HPC version of Microsoft's Internet Browser.

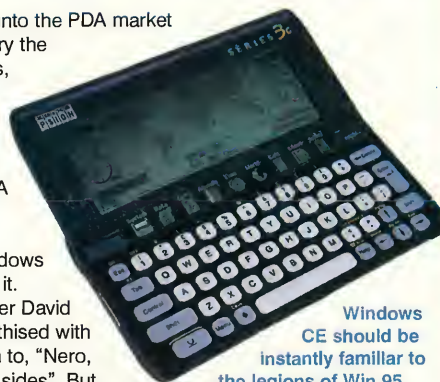
Inbox – This will enable you to send and receive email remotely with a dial-up network connection. It also works as a companion to Microsoft's Exchange, allowing you to swap inbound and outbound messages between your HPC and the desktop.

Under Assault

Microsoft's move into the PDA market is certain to worry the current market leaders, Psion. Of course, it won't come as a complete shock – Microsoft was never going to leave the PDA industry to grow and blossom in blissful isolation from the Windows platform for long, was it.

Even Psion founder David Potter recently sympathised with Gates, comparing him to, "Nero, under assault from all sides". But while Psion remains strong – its just won the Corporate Exporter of the Year award – with a turnover of nearly £100m, it compares to Microsoft's might like a handheld PC to a parallel processor powered mainframe.

Indeed, in order to continue to perform strongly, Psion will need the same virtues as its best-selling PDA – speed, mobility and a tight focus on its customers needs – to see it though. New software for the Psion includes *SMSmail*, an e-mail manager; *PsiMail Internet* an email program which also includes Web browsing; and *Monopoly* and *Scrabble*.



Windows CE should be instantly familiar to the legions of Win 95 users around the world.

BOOKMARK

The five best Web games out there, hand-picked by our brothers at .net Directory. Bookmark and bother them.



MANIC MAZE

An on-line version of those mazes you'll find in big manor houses. But, if you get stuck, you can just quit.
<http://www.worldvillage.com/maze.htm>

WEBTRIS

Remember that classic export of the cold war, Tetris? So do the Internet faithful. Spin those blocks at 28.8kbps.
<http://www.blueberry.co.uk/gid-bin/webtris>

WEBBATTLESHIP

The Net version of this classic is only single-player. But it's top, if crude, fun.
<http://info.gte.com/gtel/fun/battle/battle.html>

LETTER RIP

A version of hangman staring a zombie with a disconcerting inability to retain his limbs. Great stuff.
<http://www.dtd.com/rip/>

WATERWORLD

A graphical adventure based on the Costner-sinker. Packed with high quality stills and men with gills.
<http://www.mca.com/unicity/waterworld/>

Directory

The current issue is out there with a sci-fi special. Only £4.99



THE WORKS IN BRIEF

SERVE CHAT

Become the perfect host with *ViaTalk* from Viable Software alternatives. The *Viataalk* Chat Program turns your PC into an Internet chat server, capable of managing up to 25 connections. It includes private chat rooms, paging and the *ViaPic* Sketch Pad, with which you can send pictures to other users. *ViaTalk* costs around £30 and is available direct from the Thompson Partnership on 01889 564601.

REMOVE RED EYE

LivePix from Broderbund gives you professional tools with which to warp and distort your photographs. The £50 real-time package also enables you to accomplish practical tasks like red-eye reduction and includes project templates so you can create personalised cards, posters and even T-shirts.

TRADE UP CHEAPLY

Pow! Distribution is offering users of any graphics package the chance to trade in for Deneba Software's new *Canvas 5* for just £139.95. *Canvas 5* offers high end vector graphics, full page layout and image editing from within one package. "It delivers a completely integrated, document-centric solution so users can do everything in a single application," claimed Daniel Power, MD of Pow! After the introductory offer, *Canvas 5* will retail at £399.

TIME WASTERS

Staff are spending up to an hour a day wasting their time on the Internet, according to Star Internet. Its new *Netstar* package enables managers to restrict outgoing Internet traffic and connections. "We asked all our new clients why they hadn't connected before they met us," said Star Director Jos White. "Nine times out of ten they said they didn't want their staff playing on the net." Prices for *Netstar* begin at £795, with a monthly service charge of £275. So enjoy it while it lasts...

16 SPEED CD-ROM

Hitachi claims its new 12-speed CDR-8130 CD-ROM drive is capable of transferring data at up to 16X. It utilises Partial-CAV technology, in which the drive changes from CAV to CLV (Constant Linear Velocity) depending on the position of the read disc over the head. No price yet.

SMALL BUT FLASH

Smart Modular Technology has just released a new line of *Flash Miniature* cards. Ideal for appliances like digital cameras, cellular phones, PDAs and HPCs, data stored on a *Miniature Card* is swiftly transferred to your desktop PC via a special adapter card. 2Mb versions should cost around £50.

THE SHAPE OF TH

Superscape VR, the leading 3D software tool supplier, is creating a new Virtual World on the Internet. The Virtual World Wide

Web (<http://www.com>) links virtual cities across the Internet, with Superscape hoping it will one day outgrow the 2D Web.



Cool Street: If SuperCity does become the cradle of a new virtual world, someone must pay for that name.

"Superscape's role is that of a catalyst," said founder Ian Andrew. "We've put the core structure in place, enabling visitors to navigate through the virtual worlds that comprise the VWWW. We believe this early nurturing will allow the VWWW to take on a life of its own".

The hub of VWWW is SuperCity, a thriving metropolis divided into 3D neighbourhoods. Travelling to districts takes you to other 3D pages. There's even a SuperMetro that lets you leave SuperCity to the more distant 3D VR cities. Currently over 40 3D pages are available at www.com. Visiting the University takes you to Intel's *Virtual Stonehenge* and Anglia Multimedia's *Virtual Safari* or, you might stroll down Cool Street, where you can play virtual pool and even take a virtual rollercoaster.

The Virtual World Wide Web is implemented in VRML, the 3D version of the Web's mark-up

WHAT'S SHAKING? *Marimba rewrites the Internet*

The hottest new Web development is Castanet, from the recently started company Marimba. It's a suite of Net development tools from the same people who created Java, the key Internet programming language.

Castanet enables Web pages to permanently store programs on your local hard drive. Normally, Java applets are only retained until you quit your Web browser. Thus you must download an applet every time it's accessed. With Castanet, you'd have libraries of 'channels', firing them up as required. Furthermore, a Castanet channel communicates with its creator (known as a transmitter) when your machine is idle. It keeps itself

up-to-date and tells its creator how it is being used. Instead of browsing to find your commonly-accessed pages, you'll simply tune-in to the appropriate channel for instant information.

Whilst Castanet-like capabilities are a vital part of any next-generation Internet, they do raise important concerns. Security issues will need to be hammered out, and concerns for an individuals privacy are justified. However, by combining the advantages of applets with more traditional applications and overcoming many of the restrictions of Java, Castanet could be the technology that points the way towards the the future of Interactive broadcasting.

marimba

The Company



Pastel avant garde graphics are a foremost requirement for any new Web start-up.

THE CHARTS

Top 10 selling PC CD-ROMS

Top 10 selling PC CD-ROMS

1 (5) Flight Sim Win95

Microsoft

2 (-) RAC Rally

Europress

3 (3) Championship Manager 96/97

Eidos

4 (-) Syndicate Wars

Bullfrog

5 (-) Formula One Grand Prix 2

Microprose

6 (-) Champ Manager 2 Data Disc

Eidos

7 (-) Dark Forces

White Label

8 (-) Quake

GTI

9 (-) Screamer 2

Virgin

10 (5) Theme Park

EA Classics

INGS TO COME

Virtual Reality is brought to life

language HTML. Just as the Web transformed the Internet from a text-based resource into a colourful, graphical, cultural phenomenon, Superscape hopes that VRML and the VWWW marks the frontiers of the new Web. Still, despite an average file size of only around 100K, walking about SuperCity is a bit like Christmas shopping in Oxford Street. There's lots to see, but it takes ages to get anywhere.

If you want to claim your own real estate in the Virtual World Wide Web, you might look at *Superscape VRT Version 5*. This latest version supports HTML 2.0 and the Virtual World Wide Web format, .SVR as well as Microsoft's Direct3D, Gouraud Shading and MMX. It also includes a library of Virtual Clip Art, with nearly

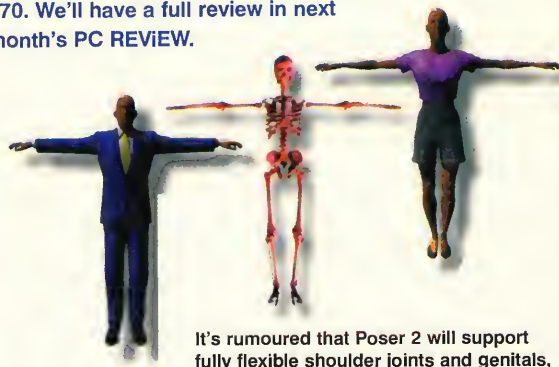
300 ready-made VR objects for dropping in your own Virtual Worlds. But before you pack your bags, be warned. *SuperScape VRT 5.0* costs £3995. Then again, that'll be a snip if the VWWW does turn into gold country.



You can play virtual pool on your PC in the Virtual World Wide Web. Let's just hope there's no hustlers in SuperCity...

MAKE YOURSELF OVER

One day, you might need an online persona to visit SuperCity. In that case, you'll surely design it in Poser. Version 2.0 of this incredible software package (which we awarded a 9 to back in Issue 56) adds animation, clothing and external props to the core human form design package. "We really pulled out the stops for this upgrade," said Dan Prochazka, Poser product manager. "Every top user request – animation, high-resolution models and better import and export capabilities is here. And our new swappable geometry lets users literally create any figure they can imagine," he added. Poser 2 costs £235, but current Poser owners can upgrade for £70. We'll have a full review in next month's PC REVIEW.



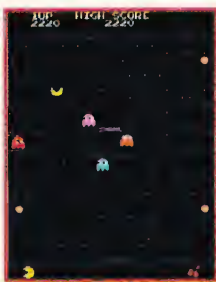
It's rumoured that Poser 2 will support fully flexible shoulder joints and genitals, but we can't confirm this yet.

OLD GAMES ARE BIG NEWS

The British Film Institute (BFI) has just created the UK's first computer and video games archive. Some 80 per cent of early films have been lost forever, and the BFI wants to prevent the same thing happening to computer games. Its collection already numbers some 2000 games, all of which were donated by members of the public.

"Although sometimes a lost treasure does come to light – as happened this year with the discovery of the silent masterpiece *The Life Story of David Lloyd George* – it is unlikely that more than a handful of lost films will ever be uncovered," said Jane Clarke, BFI Deputy Director. "By preserving video games and establishing a national archive, the BFI's initiative will enable future generations to find out about the lifestyles and interests of people in the 90s."

The BFI now wants more games, old and new, to represent the best in each genre. So, if you've got an attic full of top classic games – or the hardware itself – send them to Tony Hetherington at the BFI, 21 Stephen Street, London, W1P 2LN. Oh, and you won't get any money. But how else can you contribute to the nation's cultural heritage?



Pacman's in the museum, but the little fella's still as hungry as ever.

Don't QUAKE, SCREAM!

Software *Quake* patches, as you'll have noticed are featured on CD REVIEW each month. But here's something a bit different – an entire level based on the sci-fi blockbuster *Alien*. Creator J. Diamond promised, "Be prepared for a new level of terror and suspense! Now fully under construction, *Alien Quake* will be released sometime in February if all continues to go well." Best of all, it'll be free.

Alternatively, Activision has secured the rights to id Software's two official *Quake* mission packs. The mission packs have been created by Hypnotic Interactive and Rogue Entertainment, with id acting as executive producers. The packs promise new enemies and weapons including Electric Eels, Phantom Swordsmen and the fearsome lava nail gun when they go on sale this Spring.



CONTACTS

Activision	0181 742 9400
Blue Byte	01604 232200
Broderbund	01429 273029
BT Internet	0800 800 001
Channel	01703 814142
Empire	0181 343 7337
Fractal Design	01756 704040
Grollier	01865 264800
Hitachi	01628 585000
Intel	01793 403000
Key Note	0181 783 0755
Koch	01420 541884
Microsoft	0345 002000
Netstar	01285 647000
NovaLogic	0171 405 1777
Pow!	01202 716726
Psion	0171 262 5580
Ransom	01491 613711
Smart Modular	01908 234030
SuperScape	01256 745745
VCI	0171 470 6666
Virgin	0500 558800



THE GREAT DEBATE: DOES TECHNOLOGY MOVE TOO FAST?

Are we on a super high way or a road to nowhere?

The PC industry has always been one of rapid development, especially when compared to other technologies. For instance, it's often argued that an equivalent pace in air travel would see us flying to Australia in just a couple of hours, for maybe 50 quid. But is this the

right way to proceed, or is it merely something the industry forces consumers to accept? Do we really need more power, or do we need sleeker, better written programs, a chance to get to grips with the technology we've got and time to decide what technology we really need?

FASTER

Is technology moving too fast? Many of my generation haven't grown up with computers, and so the technology appears to move at breakneck speed. But computers are perceived differently by children. They are used to the technology and the rate of change that comes with it.

People often ask: 'Why do we need faster and faster processors? Isn't it just a cunning ploy by manufacturers to make us buy new computers?' In fact, we need faster processors to make computers simpler to use. The analogy I like to use is that of the car industry.

It makes bigger engines so cars can go faster, but we use faster processors to make computers easier to use, more flexible to use and a little more fun to use. And the evidence is that we are achieving these goals. Faster processing has brought computers to a much broader range of people. And they use computers not only because they are easier to use, but because they are also worth-while to use.

Another complaint is the speed at which today's PCs become yesterday's technology. It can be frustrating to

find that the new computer you bought is worth much less when you come to sell it. But really, this fast rate of change means that consumers are the real winners. When it comes to buying a new computer, you are getting a much better deal. Your new computer will be faster, more powerful and offer more features than an older machine, and yet cost roughly the same price. It's retailers and manufacturers who feel the pain, as they try and keep up with all of this.

Computers are sometimes blamed for turning our children into a generation of anti-social beings, who can only interact with machines. My ten year-old son is crazy about three things: television, computers and Lego. I suspect most parents would

prefer their children to sit in front of a PC rather than a television, because they are doing something interactive.

But although my son loves computers, he also does the same things I did at his age – hang out with friends, play sports and enjoy board games. It's about getting the balance right, and most children are good at achieving this.



Sharad Gandhi is Intel's European marketing manager for multimedia and the Internet. Aged 45, he's married with two young children.

SLOWER

Just like climbing from a Mini into a Ferrari, it is hard not to be seduced by the power and sophistication of our latest PCs. Yet despite all the excitement, all they actually do is go a bit faster than they used to. And like the Ferrari, it may be that in 100 years from now, the dream of a world where everyone has a super-fast PC may turn into some kind of gridlocked road-raged nightmare.

Modern societies' worship of technology is not a problem in itself. However when a new piece of technology comes along, there is a tendency for us to adjust society to fit the technology rather than the other way round. The ever-faster PC has not reduced the hours we work, but has instead led to a significant decrease in employment. What society needs most at the moment is more jobs, yet what it gets is faster processors. Ironically the time we save in faster processing, we now spend in arranging ever more sophisticated security to protect our machines from the very people those machines have excluded.

The speed of technological change also means that our current PCs become obsolete almost as soon as they have been bought. And every time we discard or upgrade an old machine we leave the problems in the environment for our grandchildren to sort out. As any old environmentalist will tell you, there is no away to throw things to, and almost every piece of PC you have ever discarded will be sitting around somewhere waiting for someone else to deal with it. With so many of the real costs of production and disposal



Rob Harrison is co-editor of the Manchester-based Ethical Consumer magazine. For further information about the magazine telephone 0161 226 2929.

being borne elsewhere, it is hardly surprising that PC prices are falling.

These environmental problems are not insoluble. With an industry producing properly upgradable machines, taking responsibility for their products at the end of their life-cycles and writing sleeker programmes for older machines, much could be done tomorrow. But the societal problems are more difficult. When 70 per cent of the world's population doesn't even have access to electricity, our dreams of a global information age are currently built on sand.

NEXT MONTH

Will network computers ultimately replace the PC?

Next month in PC REVIEW

Picture from PhotoDisc

BECOME A PC EXPERT OVERNIGHT

We reveal the secrets of
those-in-the-know.

Have you ever wondered what the experts do when they claim to be fixing your PC? When they squint as they open it up? How they justify such horrendous repair bills? Our cover story shows you how to save face and money!

PLUS: The Quake Beaters

First news on *Quake 2*. Plus, we square up the hot pretenders from Raven, Microsoft, 3D Realms and Epic. The mother of all battles!

The Shareware Bible

Over 100 shareware programs tested and featured on CD REVIEW.

Alien Versus Terminator

Good, bad or better than the movies? *Alien Trilogy* takes on *Terminator*: SkyNet.

TWO BUYERS GUIDES Which scanner?

The latest flatbed models tested. You'll be amazed how cheap they are these days.

Your next soundcard

Thinking of buying a new sound card? Don't open your wallet until you've read our roundup.

HOW TO... Create your own stunning landscapes

Getting to grips with our World Construction Set demo

Survive your PC

Live the good life with our guide to PC ergonomics

Find anyone in the world

Private investigation with the Internet

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Labs and more. All for free!

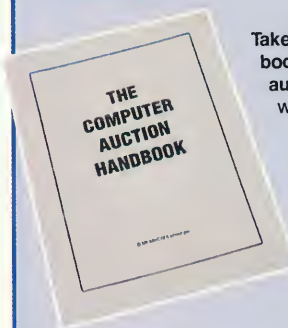
FREE JOYPADS



Want
one of these?

Not many people know that it was Euromax who first got six independent fire buttons working on a PC joypad. Rather than Microsoft. The Phase 9 Phantom 2 Plus, worth £16.99, has sold over 250,000 units and now to celebrate the quarter of a million mark, Euromax has got ten to give away. The first 10 entries pulled from the hat on the closing date of February 15th will receive a pad each. Just write, on a postcard with your name and address to:
Phantom Freebies, Euromax Electronics Ltd, Bessingby Way, Bridlington, East Yorks, YO16 4SJ

FREE AUCTIONS HANDBOOKS



Take this
book to an
auction
with you.

To go with our How To Get PC Stuff Cheap feature on page 120, we've teamed up with the mail order book publisher Carnell Ltd to offer up 20 copies of *The Computer Auction Handbook*. With chapters on successful bidding and how to choose a computer, the book costs £15. The first 20 readers to write in, however, will get a book free. Write to: **PC REVIEW Competition, Carnell Ltd, Main Road Alresford, Colchester, Essex, CO7 8AP.**

LANGUAGE LAB GIVEAWAY

Euromax has added Russian to its *Language Labs* range, and Chinese, Dutch, Italian and Japanese are all on the way. Freebies has persuaded the company to give away the

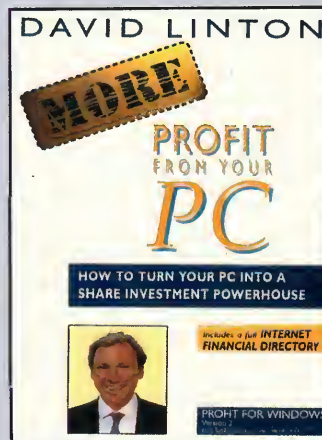
original two discs in the set, worth £19.99 each. All you have to do is get on the phone and decide whether you want to learn Spanish or French. The first 20 to ring up will win the software – and if you don't make the first 20 never mind – there are plenty of other special offers available. This offer is available to UK readers only, via **freephone 0800 454 330**.



You
can learn
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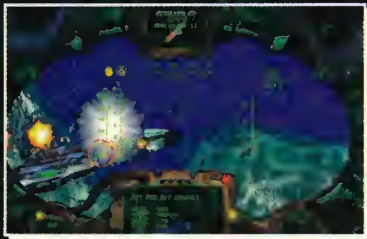
On page 40 we touch on the bare bones of using your PC to help with stock market investment. But if you want to know the full story, then you need to read *More Profit From Your PC*, by David Linton – the chap who designed the *TeleShares* software. The book's just gone on sale for £14.99 and comes free with a full game called *Profit* which is worth £9.99. Updata is offering free copies of the book to the first 25 postcards pulled from their bowler hat on February 15, 1997. Write with your name and address to:
PC REVIEW book offer, Updata Software Ltd, Updata House, Old York Road, London, SW18 1TG.



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1996

THE YEAR IN REViEW

THE TOP FIVE GAMES OF 1996

1. *Tomb Raider* (Christmas 1996)
2. *Quake* (October 1996)
3. *The Darkening* (December 1996)
4. *Civilization 2* (April 1996)
5. *Formula One Grand Prix 2* (September 1996)

Mystic Meg may be a household name because she can see that someone wearing red called Brenda will be lucky tonight, but how much more refreshing that PC REViEW should look back instead...

There may be no psychic skill required to accurately predict the past, but there's something perversely entertaining in flicking through the last 12 issues of PC REViEW, fondly recalling those special personal computing moments, laughing once again at the ridiculous hairstyle fashions the day demanded and smiling wryly at the hilarious delays that have plagued the games industry in the months that are slowly shrinking into the horizon Star Wars prologue style.

So grasp our hands firmly, for fear of falling, and come walk through the air with us. Revisit the moments we've shared, and exclaim loudly, as we have already, that there is no way that happened eight months ago – it seems like only yesterday. Enjoy our year in REViEW, Mystic Meg in reverse fashion, and it might seem like it only happened today. Or something.

CAPRICORN (December 22nd to January 20th)

Capricorns celebrated their birthday this year with the penultimate issue from the old school of PC REViEW, a month before it was taken over by the potentially world dominating corporation innocuously known Future Publishing. While still under the guise of EMAP, PC REViEW was proud to announce the Diamond Edge 3D graphics card as the Best Entertainment Peripheral of

The Edge card from Diamond promised accelerated 3D games. Only three appeared.



1995. Sadly, the games industry and punters with money failed to get quite as excited. *Panzer Dragoon* from Sega was the only game that appeared after the launch of the Edge.

Capricorns, who should avoid relationships with Taureans and money grabbers at all costs, enjoy heavily scripted games, hence the latter syllable in their star sign. To recognise this fact, *The 11th Hour*, *Rebel Assault 2* and *Spycraft* were all awarded a healthy profit-increasing eight.

AQUARIUS (JANUARY 21ST TO FEBRUARY 19TH)

Aquarians, bearers of water, are feeling a bit left out since H2O is available on tap in all regions except Yorkshire. It is for this reason that the final issue of PC REViEW, cast helplessly into UK newsagents by EMAP, featured a review of Charlton Heston's very own *Voyage Through the Bible*. You see, as any fine upstanding citizen who has done his time in Sunday school

knows, Jesus turned water into wine, a beverage which has never suffered a hose pipe ban.

Although the film was still an annoying month or so away, Aquarian birthdays landed around the time of *Toy Story* hype, an attractive mix of computers and popular entertainment as it was the first film to be created entirely digitally – um, apart from the voice overs. Our sister magazines *Computer Arts* and *PC*



You could create the follow-up to *Toy Story* with your 386... and a lot of spare time.

Guide went ape with excitement, as did, seemingly, the entire country. Although *Toy Story* used 110 industrial computers, everyone got it into their heads that home PCs could do the same thing. They could, of course, only more slowly and less smoothly.

PISCES (FEBRUARY 20TH TO MARCH 20TH)

In a decidedly fishy way, PC REViEW celebrated an almost Christ-like rebirth this month, published for the first time by the scarily wealthy Future Publishing. A glorious day-glo masthead adorned the front cover, giving way to an issue packed with trouble shooting tips. We challenge any purchaser of this issue to claim that they have had PC difficulties from now on. On a grander scale, *Quake*, or at least a very limited version of it, ►



The creepy and the bizarre were investigated in an early look at Acclaim's *Bad Mojo*, where you, yes YOU, play the cockroach.



Fractal Designs' Poser excited Mat Broomfield's artistic nature, producing these stylised humanoid forms.

Mark Leigh and Mike Lepine (used by Hale, Pace, Tarbuck, Abbot and even... Beadle) revealed how they have been brought in to add some humour to the Victorian-style adventure *The Gene Machine*. Leigh confessed that he didn't find *Sam & Max* that funny. Oh? Lot's of other people did.

A prediction of the ten most wanted games correctly identified *Syndicate Wars*, *Red Alert* and *Tomb Raider* as three of the finest games released in the twilight months of this year. Only *Time Commando* and *Road Rash* failed to live up to our high hopes, with *Madden 96* not even making an appearance. *MDK*, *Hardwar*, *LBA 2* and *Flying Corps* are stupidly close to being released.

James, exhibiting an alarmingly violent side to his placid nature (you should see how relaxed he is around issue deadline), played *Toshinden* literally to death. Fortunately Keifer Sutherland was in Bath doing panto and was able to resurrect the editor in true *Flatliners* style.

Taureans should not romance after eating garlic.

1996

THE YEAR IN REVIEW

THE TOP FIVE MULTIMEDIA DISCS OF 1996

1. *Encarta 97* (December 1996)
2. *Creatures* (October 1996)
3. *Organic Art* (May 1996)
4. *Volcanoes - Life on the Edge* (May 1996)
5. *Paul Cezanne - Portrait of My World* (June 1996)

TOP FIVE APPLICATIONS OF 1996

1. *Power Goo* (September 1996)
2. *Poser* (June 1996)
3. *Paint Shop Pro 4.0* (November 1996)
4. *Cubase Audio XT* (October 1996)
5. *3D Studio Max* (August 1996)



It may only have been a sequel, but MicroProse's *Civilisation 2*, which was released this month, took the reviewing and buying fraternity by storm, and still sells well.

It was released to a slobbering public. While our editor James Binns was the jammy git who got to play a beta version of the real game, networks around the world relived the *Doom* moment, crashing under the pressure of eight player *Quake* sessions. It was only a three-level deathmatch test, but those lucky enough to be able to try it proclaimed it the best game ever made. On other gaming fronts, our April issue (out in March) welcomed Looking Glass' astounding *Terra Nova*. Unfortunately, like every other game this troubled company has produced, audiences just don't have the hardware to play something so impressive. *Terra Nova* didn't so much heavily dent the charts as rub up against them with a feathery tickle. Pisceans should avoid deserts and cream sauces.

ARIES (MARCH 21ST TO APRIL 20TH)

Ironically, albeit in the Alanis Morissette not-so-ironic way, Aries brought about a huge feature on getting 16.7 million colours on your PC, a feature only possible with extra video RAM. Ha ha ha. *Quake* exploded onto the page again as James told us more of the eventual secrets - how was he to know how long the final version would take to appear? Gremlin created a new



Gametek's *Ripper* was renowned for being the first Interactive Movie that is actually 'all right'. Christopher Walken and Karen Allen headed the cast.

amalgamated genre with *Normality*, a point and click adventure using real time 3D and an incredibly annoying central character.

We also got our first glimpse of William Latham's extraordinary *Organic Art*, a graphics program using natural genetic patterns to create hypnotic animation on screen. It grabbed our attention so much that a few months later we felt utterly compelled, almost as if we had no recourse as to our own actions, to investigate the sudden re-exploration of artificial life on the modern Pentium-equipped PC.

If you fall under the constellation of Aries, avoid emotional encounters with the Welsh. Or any of their beasts.

TAURUS (APRIL 21ST TO MAY 21ST)

An exclusive interview with comedy writers



Any excuse to get Jeremy Beadle in the magazine. Your first glimpse of *Gene Machine*'s script writers before June's interview.

GEMINI (MAY 22ND TO JUNE 22ND)

How strangely appropriate that a 2D hark back should coincide with a month so twin-like in its astrological connection. It also collided with *Euro 96*, a nation absorbing sporting session that also saw a strangely large number of 'girl' movies at the flicks. Appropriately enough, the July issue of REVIEW carried a demo of

Euro 96 the PC game, a visually stunning but slightly disappointing football simulation. As if to acknowledge that not everyone likes sport, the careers of has-been movie stars were held up to the light and found to be

A free CD! The generosity! *Extreme Sports* covers the weirdest things you could do in your spare time in the name of sport.



phoney, particularly their 'guest appearances' in the frightening number of interactive movies that appeared during 1996.

As a gesture of gratitude for your continued support, we also handed you the complete commercial CD of *Extreme Sports*. You didn't even have to do anything (except buy the mag). Aren't we fab? Meanwhile, *Duke Nukem 3D* rocked the game world, proving itself to be a superb single-player game (arguably better than *Quake* now)

2D graphics are back in vogue, because it's something you can do with your PC.

despite the blocky graphics. A crackin' month all round then, and a fine start to a lovely summer.

If you subscribe to this astrological thing, Geminis, don't marry your twin – it's illegal. Just watch *Brookside*.

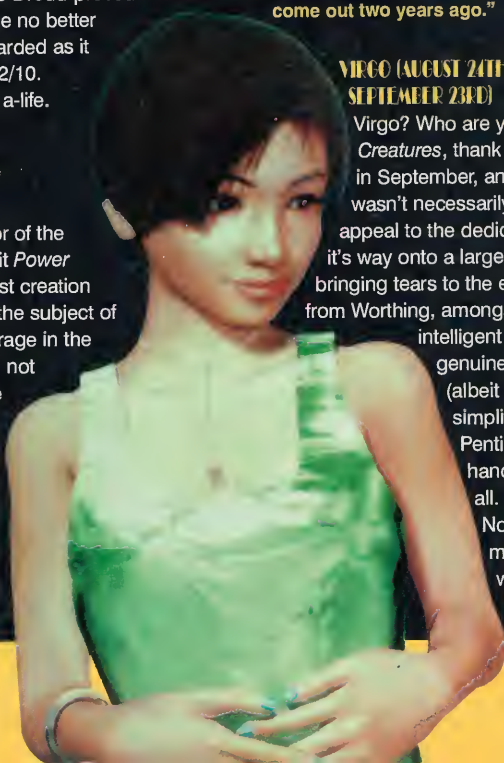
CANCER (JUNE 23RD TO JULY 23RD)

The August issue of PC REVIEW was bedecked with a huge picture of Kyoto Date, some teenager aiming to become Japan's latest pop sensation. She was mostly remarkable for being an amalgamation of dancer, singer and model, and, naturally if depressingly, was created by computer. It spawned an interest in artificial life in our office, including an early look at the thoroughly engaging *Creatures* from Warner.

A-life has moved on a little since *Life* and Activision's *Little Computer People*. Movie themes stretched into this month with a guide to film companies' Web sites. Incidentally, *Judge Dredd* proved that the game could be no better than the film, rewarded as it was with a paltry 2/10. Crabs should get a life.

LEO (JULY 24TH TO AUGUST 23RD)

Kai Krause, author of the graphically explicit *Power Tools* and his latest creation *Power Goo*, was the subject of much witty banterage in the September issue, not least because the latter caused such mirth and praise. Goo is used to stretch *Kyoto Date*. She's 16, she looks like she's 12, and she's a digital person.



and squash graphic images, resulting in humorously squelched portraits. It also tied in nicely with a photo manipulation feature, with a black Queen Elizabeth, hippy Major and Stalinist photo propaganda.

Intel's plans for MMX were announced (see *Tomorrow's World*), which is a handy technological way of skirting around the subject of, um, sex, which, well, if you don't mind, we don't really want to talk about. It was a month for delayed games eventually making an appearance too. Z turned up after four years of development, and caused some wide spread disappointment. Despite being a genuinely fun game, it just wasn't all we wanted it to be. MicroProse's *Formula One Grand Prix 2*, however, was everything we hoped, even if the network option is still missing. Leos, avoid kissing dogs.



Z finally arrive to cheers of, "Hey, that's quite good fun, but it really looks like it should have come out two years ago."

VIRGO (AUGUST 24TH TO SEPTEMBER 23RD)

Virgo? Who are you trying to kid? *Creatures*, thank God, finally arrived in September, and although it wasn't necessarily something to appeal to the dedicated gamer, found it's way onto a large number of PCs, bringing tears to the eyes of large bikers from Worthing, amongst others. Its intelligent modelling of a genuine human brain (albeit one greatly simplified so that your Pentium could actually handle it) impressed all. Hoorah.

No one likes a laugh more than a Virgo, which explains why giggles galore can



What do you get up to at the weekend? As well as the preposterous, PC REVIEW also demonstrated how the media twist stories using photo manipulation.

be found in the October issue's comedy feature. How we laughed!

Oh, and something called *Quake* turned up at last. It was the full version too, and did rather well, scoring the first perfect 10 of the year. A round of applause for iD, then.

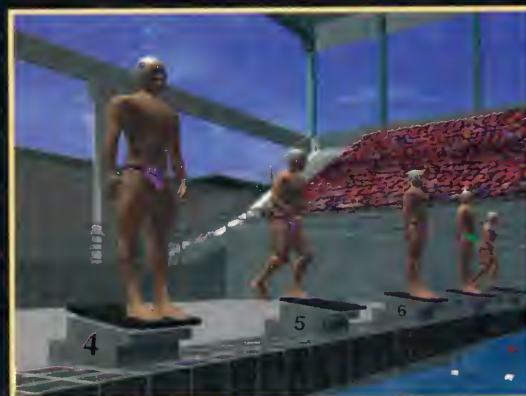
HOW WRONG WE WERE...

It takes a big magazine to admit it was wrong. You can back a number of fine horses but they won't all come in first.

Assured that the old REVIEW regime had been offered a complete game by the rarely ingenious Gametek, the February issue was proud to award the still invisible *Battle Cruiser 3000AD* a mighty nine. To this day it has yet to appear on shelves, aiming instead for a January 1997 appearance. Hell, Gametek have even changed their advertising campaign twice. Time waits for no game, so let's hope it's improved more than its competitors have over the last year.

Meanwhile, the July issue was proud to produce a well-timed feature on the making of Eidos' *Olympic Games* official license. In hind sight, we can officially confirm that the resulting game, despite its potential, is as direly empty as Britain's medal cabinet this Autumn.

In the September issue we lauded the introduction of computer games designed by Steven Spielberg's Dreamworks SKG. Now this one had plenty of potential, so it can hardly be our fault that the first two results, *Director's Chair* and *The Neverhood Chronicles*, were both so poor. ▶



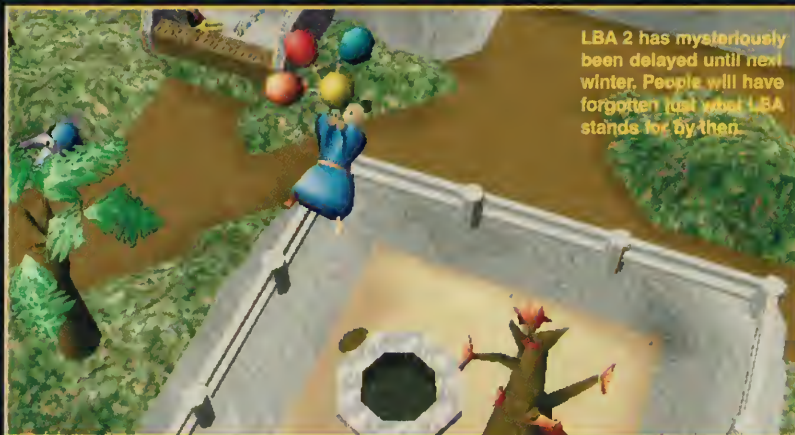
Eidos' *Olympic Games* could and should have been a lot better than it turned out to be. It wasn't.

WHATEVER HAPPENED TO...

LBA 2? Or *Little Big Adventure 2*, to those new to variably sized adventure shenanigans from Adeline. Well, although it was expected to arrive in time for Christmas 96, it has, in fact, been pushed back a whole year. Barring further delays, it will now be with you at the end of 1997.

And what about *X-Wing* vs *TIE Fighter*? LucasArts fast approaching follow up to the more succinct *TIE Fighter*, should have been the biggest game of Christmas. Expect it in the next couple of months.

HardWar from Gremlin, also expected for Christmas gone is shuffling its way towards the stores too. With any luck, however, Rowan Software's *Flying Corps* should be with you by now. Empire hoped it would be on the shelves by Christmas Eve.



LBA 2 has mysteriously been delayed until next winter. People will have forgotten just what LBA stands for by then.

1996 THE YEAR IN REVIEW



Daytona was still one of the finest Sega arcade games, until it came over to the PC.

◀ *Syndicate Wars*, the long awaited sequel to Bullfrog's classic, was released too, and while receiving a worthy eight, it would have been nice for it to have been, well, perfect.

LIBRA (SEPTEMBER 24TH TO OCTOBER 23RD)

Damon's Grand Prix success rubbed shoulders, albeit in a less impressive way, with PC REVIEW's huge sport feature in the issue made unique by the printing of November 1996 on the cover. But, as if to be perfectly fair to indecisive Librans, the issue also concentrated heavily on the joys of gadgethood. Our favourite games are made that much more favourite with the addition of some of the gizmos from hell. A sturdy steering wheel for the sublime GP2 topped the bill in the price stakes and generated a hardware thirst that was only to be satisfied with next month's uber-collection. Gamers weren't too disappointed this month with the enormous *Daggerfall*, Europress' surprising *Network Q RAC Rally* and the heli-coptery *Hind*.

The first six 3D cards were put through rigorous tests to see which one you should buy. Matrox's *Mystique* wore the laurel.

SCORPIO (OCTOBER 24TH TO NOVEMBER 22ND)

As promised, Scorpions the world over, you got your gizmo lot in the December issue. 50 of the blighters begged for your money and many deserved it. Boringly, we also managed to get caught up in the argument suggesting that coverdisc demos are killing the software industry, a matter that still hasn't been fully resolved. We also went backstage for the creation of *Phantasmagoria 2*, which we now understand is to be the last game from Sierra On-Line's Interactive Movie Pit of Hell. Oh well.

Games took a predictable but disappointing pre-Christmas slump, with *Screamer 2* being the only astounding release of the month. There were some crowd pleasers, notably Microsoft's

Scully-starrer *Hellbender* and the cinematic *Deadly Tide*.

Scorpions are renowned for pinching. And stinging.

Big Brother is watching you. This Colour QuickCam connects to your parallel port and is just one of the 50 gadgets we investigated with our usual enthusiasm.



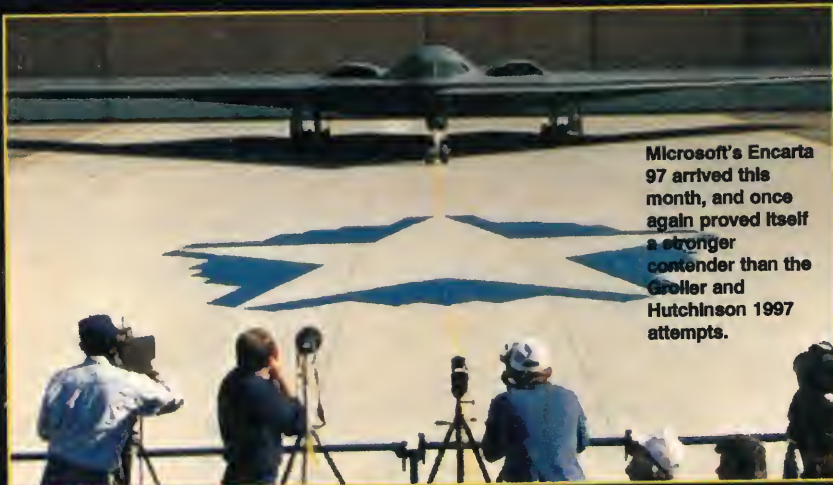
SAGITTARIUS (NOVEMBER 23RD TO DECEMBER 21ST)

Strange shaped folk that you are, Sagitarians are bound to enjoy our game of the month for this pre-Christmas run up. *Tomb Raider*, undoubtedly one of the finest single player games to ever appear, features Lara Croft, a young lass who appears to be delectable from the art work, although on-screen, betrays her true triangular likeness, which is most unfortunate.

And as Lara gracefully refuses to shed layers for testosterone laden post-pubes-cents, an argument is currently brewing over

Quake finally turned up after months of delays. No one in the REVIEW office was disappointed, particularly not at 6pm when our network choked under multiplayer games.





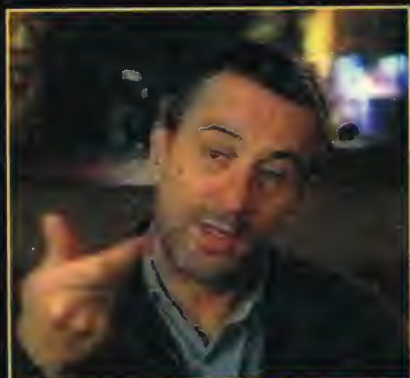
Microsoft's Encarta 97 arrived this month, and once again proved itself a stronger contender than the Groller and Hutchinson 1997 attempts.



Tomb Raider is happy to receive only the second 10 in REVIEW this year, and it certainly deserves it. Bless Lara's heart too.

the escalating trend to stick naked birds or violent images in adverts to push decidedly dodgy games. Gametek's deplorably tasteless Joanne Guest image has been systematically censored by PC REVIEW, while some violent Virgin ads have been banned altogether. It's caused a right ruckus, we can tell you.

Red Alert finally turned up to muted applause – great, but a bit too similar to the last one, Westwood. But, as a masterful finale, PC REVIEW finished the year looking valiantly ahead to the joys to come. In an astounding 3D extravaganza, *Star Wars* was finally given the coverage it deserves as it returns to the screen in fully-digitised effect. So, Sagittarians, go to the pictures. (SO)



The Christmas issue featured the massively successful actor Robert De Niro, who is the executive producer of 9, Tribeca Interactive's upcoming adventure. Return of the mook?

THE OUTSIDERS

An investigation into huge companies breaking into new PC grounds.

1996 saw the arrival of Sega, Microsoft, BBC and Hasbro vying for a slice of the gaming pie. Even the biggest can't get it right all of the time, though. Sega's arcade games are undoubtedly astounding, but the translations of *Daytona* and *Sonic CD*, while reasonable, failed to live up to our dreams. Microsoft's first games, with the exception of *Monster Truck Madness* and *Flight Simulator Win95*, are atrocious. Have a gander at *Football* when you can (without paying for it, naturally).

The BBC stuck out *Mastermind*, which, because it is both a trivia game and has a black leather chair, should have been astounding, but in the end it proved to be good, rather than excellent. Hasbro, readying *Battleships*, *Cluedo* and *Risk*, had some success with *Monopoly*, but early reports suggest the *Risk* may just miss the mark. (See page 59.)

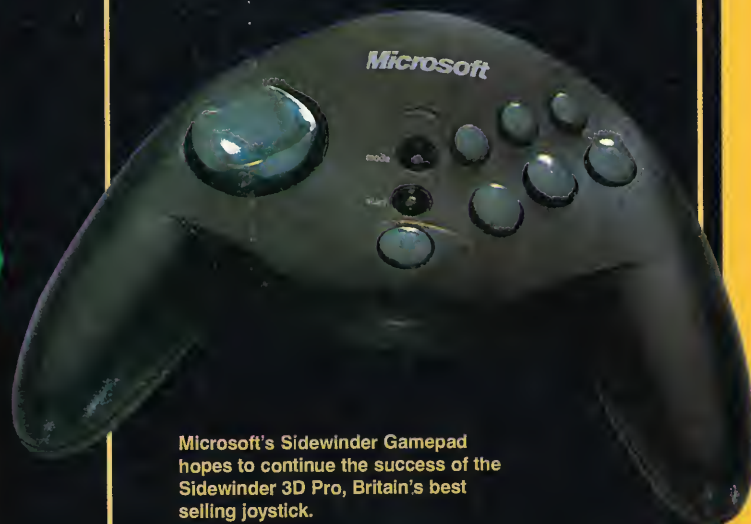
TOMORROW'S WORLD

Let's take a look at those technological advances, and ask: have they advanced?

At the start of 1996 we firmly believed that the year would be generous enough to offload high density CD-ROMs our way. Be they the multi-layered or blue-lasered variety, we frankly couldn't care less. Our greedy lifestyles dictate, however, that we must have a storage system bigger than the poxy 650Mb we are used to. Despite haughty self-congratulation from the technical geniuses involved, we still haven't seen any examples. Has it all gone horribly wrong?

Microsoft's Sidewinder Gamepad, using a revolutionary (for the PC) daisy-chaining system so that up to four controllers could be connected to a single socket, finally appeared during Autumn's dying months. Although not as comfortable as it could have been, it is at least useful.

MMX, the astounding 3D Pentium-based chip, was announced by Intel. Far from rendering the 3D cards we are now seeing unnecessary, Intel claims that the MMX is capable of working alongside them, accelerating video and sound in particular. Expect MMX-ready PCs by Easter.



Microsoft's Sidewinder Gamepad hopes to continue the success of the Sidewinder 3D Pro, Britain's best selling joystick.



THE MAIL

Missing software companies, full games, budget games and more...

DESPERATELY SEEKING SERIF

G'day. I've just bought the September issue of PC REVIEW – yes we're a long way away and it takes a long time to get out here, though it may well have been on the shelf for a couple of weeks. Anyway, having just installed the excellent *PhotoPlus 1* from CD REVIEW I've just tried to phone and register the program only to get message that the number given is no longer available.

It appears I have ten days from today to register the program. I trust my computer won't self destruct if I don't but can you please help with a new number, email address or whatever where I can register. Love the program and your mag.

Jim Blakeley, Australia

Anyone having troubles registering any of our Serif giveaways should give their office a call on UK 0115 942 1502 or email: support@serif.com.

SWIZZED BY SWIV

I'm probably not the first one to tell you this: There seems to be something wrong with CD REVIEW 62, since there is only one game on it, namely the full (! think!) version of *SWIV 3D*! By the way, my five-year-old daughter wants me to thank you for this - she's playing it all the time!

Mads Koefoed, Denmark

Blimey. You are the first person to tell us this. We looked into it and reckon that SCi use the same CD duplicators and they mixed up some of our discs. Not bad though! Anyone else had any similar and unusual surprises?

QUAKE: THE LAST WORD

Why does everyone think that *Quake* is the ultimate PC game ever created? Why is it the most important game ever? Quite simple really. It isn't.

No game is perfect, not even your beloved *Quake*. It scores no points for originality, since it could just as well have been called *Doom 3*. Yes, I know that the graphics are infinitely better, but the game is still just a collection of independent levels that are navigated by killing everything in sight and finding the exit.

The monsters are fairly good, except the Spawn and the Rotfish – with the former being the most annoying and unrealistic horror that I have yet seen in this type of game.

The final level (Shub-Niggurath's Pit) was a complete joke. This seemed suspiciously like an Id afterthought, something that was added to provide an ending (and a very poor one at that). The ultimate alien monstrosity wasn't what I expected. It's a writhing, polygonal blob with tentacles that was less threat than a health power-up. The collection of Shamblers and Vores which attacked me was hardly original, and I was so disappointed by this time that I brought the console down, switched to God mode, and blew everything to pieces.

Incidentally, I thought that the weapons were rather good. The rocket launcher was particularly impressive, with its lighting effects and smoke trails. I would like to know one thing

from Id Software. Where the Hell did the dragon get to? This would be such an obvious contender for a rune guardian that it is difficult to understand why it was not used. I am sure that you are just as disappointed as I am that it failed to appear.

Christopher Low, Cumbria

Next month we're going to answer your ramble with one of our own, and bring you exclusive news on *Quake 2*, Raven's and Microsoft's new games using the Quake engine, and details on the hottest contenders to Id's crown. See you on January 28th.

LONELY HEARTS CLUB

As a long standing reader of PC REVIEW, I am hoping to enlist your help. I am a fan of the growing range of multi-player network games available. Games such as *Duke Nukem 3D*, *EF2000*, *Descent*, and of course not forgetting

Doom. As I have recently relocated, I am keen to find individuals in my local area who have a similar interest. Therefore, would you be so kind as to place a small notice in a forthcoming edition of PC REVIEW requesting interested parties to get in touch with me.

I live halfway between Oxford and Swindon and am particularly interested in finding people in this area. You need no prior network experience, or equipment as I have some spare kit, just an interest in multi-player games. Anyone interested may contact me by at my email on: gcomisk@ndn-net.co.uk. Glenn Comiskey, Oxon

If other readers write in with similar enquiries then we might be persuaded to run a notice board for network gamers.



If you have a point to make, write it down. Send it to us at the address shown above, or e-mail us on pcreview@futurenet.co.uk.

Letter of the month

CHEAP!

It has been some time since I have bought myself an up to date game, the prices these days are just too prohibitive. Most of the time I wait until the price has dropped or the game goes into the 'Budget Area'. Quite often, this only takes about six months, but this is an all to excruciatingly long wait for some titles. Just recently though, I was looking at the charts compiled in your November issue.

What a surprise, *Civilization 2*, *Command and Conquer*, and many others I could mention. I know for a fact that the prices of these games have recently dropped. Looks like other folks have the same ideas as I do and wait till the games gets cheaper. If only everyone did this, maybe software companies would have to take note and release the titles at lower prices to be competitive.

It wouldn't surprise me to see *Grand Prix 2* at the top of the charts again in six months time. Wayne Cappleman, Essex

Yes. It's a real problem for software houses. Very few new releases are even as good as many budget classics in the first place – let alone at the bargain prices.

1997

NEXT YEAR NOW

We say 'Avanti!' and take a look at the changes next year will bring to your PC computing.

Only PC REVIEW took the trouble to send a reporter forward in time to Christmas 1997 for its predictions piece – and damn the expense. Having checked out next year's fashions, music and lottery results there was still time for an hour of intensive research into the future of PC computing.

Most noticeable is the PC's changing image. In 1997 it's being positioned as a consumer communications device, something to line up with the radio, TV, fax and phone. It's becoming as much a part of everyday life as *The Simpsons* and central heating. PC buyers now assume the thing will get from A to B and only want to know how fast, comfortable and convenient the journey will be.

Email access has reached critical mass with universal email address directories up and running. Only poor people aren't on the Net and who wants to talk to poor people?

Transparent encryption guarantees data privacy which, along with digital cash from 12 different vendors has created a surge in

demand for services such as money management, shopping and insurance – to name the merely useful.

Most people use software agents for these functions though few realise it. They just know they want a 72K Koenig-Danton 46/SE with the motorised Poklefeed™ so they ask Internet Explorer 4 to find them one, and it spawns an agent which by default finds the cheapest.

The only value added extra possible is time. Consumer goods companies rush to hire pizza distribution experts. On a good day you can have some common goods delivered to your door within 20 minutes of making the enquiry.

New services have the satellite dish generation buying into PCs as fast as they can borrow money. While the Internet has the highest profile with the new buyers on-line gaming is first into profit.

Gamers are still mostly male – now there's a surprise – but at least they're learning some social skills rather than just playing with themselves. Games sites are ▶



Web consoles and DVD players will slowly drip into the living-rooms of the nation.

1997 – THE HYPE IN BRIEF

* Intel starts pushing multi-processor Pentium Pro Deschute motherboards and Klamath processors for home use.

* Netscape in financial trouble and looks like becoming part of Corel's £50 Wordperfect Office suite – Microsoft Office faces real competition.

* High capacity removable storage is fitted to PCs as standard. Iomega, of Jaz drive fame, makes serious money.

* Microsoft announces Windows NT is the next upgrade for Windows users, complete with browser interface and free MSN connection.

* Netstation style TV set top boxes are still on the shelves but vendors claim, 'sales are set to take off any day now'.

* DVD players are on sale but cost too much and there are too few films on disc. Vendors look to the PC market for 1998.

* Digital TV broadcasters offer fast Net download as extra subscriber channels, but the potential doesn't match cable.

* Cable companies promise set top box combining channel decoder and high speed WebTV style Net interface – but not just yet.

* The Internet begins to spam with flat rate subscribers effectively locked out for hours every day.

* CD-R – CD-ROM drives capable of writing to disc – appear at £250.

* Games you can run using voice control appear – and you thought they were noisy before.

TECHNOBABBLE

Big screens are in. 17-inch monitors are affordable, flat 14-inch active matrix screens are becoming an elegant alternative and wall hung flat screen plasma screen TVs are on sale.

The Universal Serial Bus – USB – is standard in 1997 PCs with its support for up to 127 devices on one socket at 4Mbps. In practice, you get two.

Fast, intelligent 56Kbps modems, meanwhile, become the standard as ISDN once again fails to make it while cable modems remain a dream for most users.

The new modems differentiate data, voice and fax calls automatically. Your PC is now a one-stop communications shop. Low cost combination ink-jet based scanner/printers replace the

current set-up of having separate fax machines, scanners and printers linked to your PC.

Once again it's the year of the palmtop computer. This time, though, it's based on the digital phone. Web, email, phone, fax and even video are on a handheld near you with data replication from your real PC using infra red.

Portables become a viable alternative to desktop PCs, but no-one expects them to be particularly small or light any more. They have to do the whole job.

Java stations and Windows CE are noteworthy for their absence. It turns out people don't want computers with less features at any price. How odd.

PURE ENTERTAINMENT

Games are bigger, faster and better looking in 1997, with multi-player Net support built in. Many of them are written to run directly under Windows 97 and Windows NT 4.

However, no one has come up with a stunning new game concept – only gorier versions of existing titles. This helps fuel demand for on-line games. Hey, you can

talk to the pilot of the plane you're trying to shoot down.

The fast, reliable mechanisms required to deliver quality games are also being used for less active entertainment. Most people visiting a game site are just sitting around chatting, watching the show-offs play. Advertising has become entertain-

ment. Accept an interactive ad and you get a credit. Competition to make entertaining ads heats up, blurring the distinction between ad and product.

CD-ROM is more popular than ever for software and demo distribution but its off the back of the Net – the flood of multimedia titles dies to a trickle in 1997.

1997
NEXT YEAR NOW



Thinner monitors like the Taxan will come down in price. Gradually.



Portable data storage media, like the Jaz drive, now come as standard.



On-line gaming services will start to include other socially-orientated features.

Wireplay

The games network from BT

▶ also acting as jump off points for new socially-orientated services.

Among adolescents of both sexes, cheap, fast on-line multimedia creates a new mating game – totally safe sex. Video at under five frames per second turns out to be spot on for mutual admiration. Their parents are into it too – with a different bias.

Making it all more workable are the 56Kbps modems which become standard in the first quarter of 1997. Intel's MMX (Multi Media eXtension) technology appears in a 150MHz Pentium

processor. It makes it easier to handle on-line multimedia in software. With a direct, modem to modem connection it turns some interesting tricks.

DVD, the high density successor to CD-ROM, is in the shops and staying there. People are used to video recording and playback. It hasn't taken off on the PC yet because, amid a sound and vision spectacular featuring screams, moans, crashes, sirens, flashing lights and ravaging monsters multimedia companies are failing – their titles just don't sell. The best of them

are busy recreating themselves as on-line content providers off the back of Microsoft's billion dollar MSN spend. Mostly, though, the information revolution is happening on the client side. You're doing it using ever more intelligent agents to find information and services – and you're paying for it.

Commerce has finally come to the Net, in two ways. The first is the premium Net connection where you pay for the total amount of data you put through your modem. In exchange you get a service guarantee. The second is via access charges. Subscription

Another Internet peripheral that will be big in 1997.



services have failed to take off because they limit choice whereas anonymous digital cash with one click payment proves simple, flexible and popular.

Home PCs might be better designed, cheaper and more integrated, but it's PC communications, not PC hardware that is exercising the minds of PC users in 1997. People have been promised a communications revolution courtesy of the Net, and they want it – now. (AC)



The DVD player was expected in 1996, but only really hits the market in 1997. And even then, it bounces back.

MOTHERBOARDS

THE PCR HANDBOOK

Part One

Where better to start our new, all-encompassing guide to PC hardware than with the foundations to your PC... in other words, the motherboard.

By the time your PC reaches its first anniversary it isn't within screaming distance of the techno-edge. A new motherboard can rejuvenate it for little more than the cost of fitting an Intel OverDrive processor to your existing motherboard – a much less satisfactory solution.

Before you buy, though, you need to know which buzzwords you can ignore and which are important. First, motherboards now come in three basic designs, or form factors: baby-AT, LPX and ATX. The first two fit existing standard types of system boxes dating back to 1983. The ATX board is a better, year-old design which needs a slightly different internal layout, so you'll need a new ATX box to go with it.

Your new motherboard can have either a Pentium or Pentium Pro processor at its heart. It must, though, have three or four bus mastering PCI slots – along with some legacy ISA slots – at its edge.

It should also support 3.3V processors, run at up to 66Mhz and use the Intel 'Triton II' 430HX chipset or an equivalent PCI chipset. This enables you to take advantage of fast Concurrent PCI data transfer. Don't

buy a motherboard with the older style Intel FX or equivalent PCI chipset, it's noticeably slower. Note also, when you buy an Intel-made motherboard it can only be used with Intel processors: you can't use the faster Cyrix 200+ processors, for example.

The three motherboard types come in two flavours, basic and all-in-one. The former sort have a processor, PCI chipset, Plug and Play BIOS, four 72-pin memory slots capable of taking up to 128Mb of EDO system memory and at least 256K of SRAM second level cache.

Second Level, or L2 cache will be 'write back' not 'write through' and comes as an asynchronous cache with pipeline burst, which performs as well as synchronous cache but costs a bit less. It will probably be attached using CELP (Card Edge Low Profile) sockets which make changes easier.

The motherboard BIOS is extremely crucial. Check the following buzzwords are attached: Plug and Play, APM, DMI and CD-ROM booting – don't worry what it all means, just demand the lot in writing.

All-in-one boards add most of the ports you need to the motherboard along with

some advanced features you normally expect to require an expansion card. This frees up slots for future new features – more importantly, it frees up PCI slots.

Extras can include two EIDE connectors capable of supporting up to four IDE devices, floppy drive, two serial and one parallel port, with perhaps graphics, a SCSI port, game port, sound support and even network connections thrown in.

These all-in-one boards aren't often offered as upgrade motherboards, but should be seriously considered as they can improve the performance of so much of your PC immediately.

State of the art processor sockets are Type 7 for Pentium and Type 8 for Pentium Pro. This is something you might consider as its mildly important for future processor upgrades.

Of course, leading edge motherboards carry a premium price, but this means almost nothing compared with the cost of the processor, cache and system RAM you need to make them work. It isn't worth skimping on the quality of the underlying motherboard – always buy the best. (AC)

FIVE BUYING TIPS

1. Shop around and compare prices.
2. You'll get a better deal if you buy with processor, L2 cache and RAM pre-installed.
3. Buy the fastest processor available – you can add cache and RAM piecemeal but not processor cycles.
4. Don't buy kit you've never heard of from companies or individuals you've never heard of and expect sympathy.
5. Buy a motherboard with every extra feature you can get built-in.

Coming Soon

We recommend we buy an all-in-one ATX motherboard even if it means getting a new system box. Look to the leading edge for the following great features early in 1997.

The neatest is USB, Universal Serial Bus – just beginning to appear. It enables up to 127 devices to connect to one port at speeds of up to 4Mbits/second. In practice, you'll probably get two USB ports. It will be 1997's big thing.

You'll also be expecting a Pentium with MMX-features for faster sound and video handling.

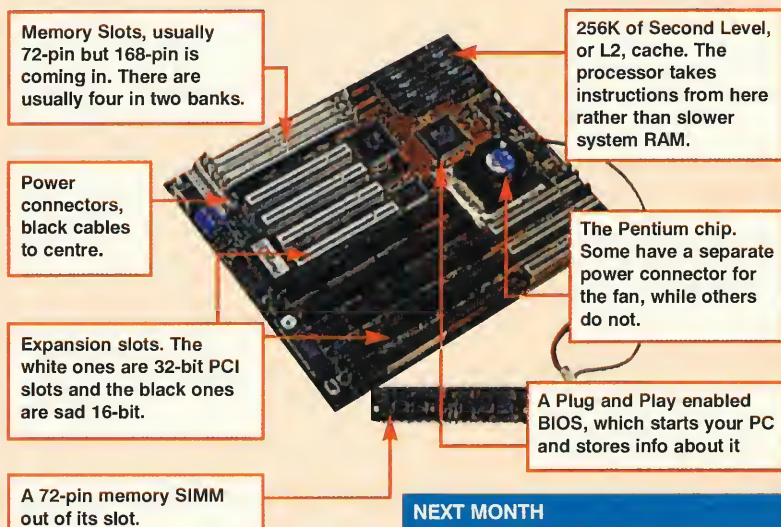
Another trend is toward building in sound and graphics. For example, the Taiwanese company First International Computer is producing boards

supporting 16-bit sound chips and 64-bit graphic controllers that support 3D graphics and software MPEG. Others are even adding hardware MPEG-1 to motherboards. Don't turn up your nose at networking chips either. The latest memory chips come on 168-pin DIMMs, currently more expensive than 72-pin units but faster. Motherboards are all headed in this way.

Finally, check out multi-processor motherboards. This may sound over the top now but it will become standard on many top-end desktop PCs next year. Think about it, a PC with a couple of Pentium Pro 133 processors inside easily outperforms a 200Mhz Pentium.

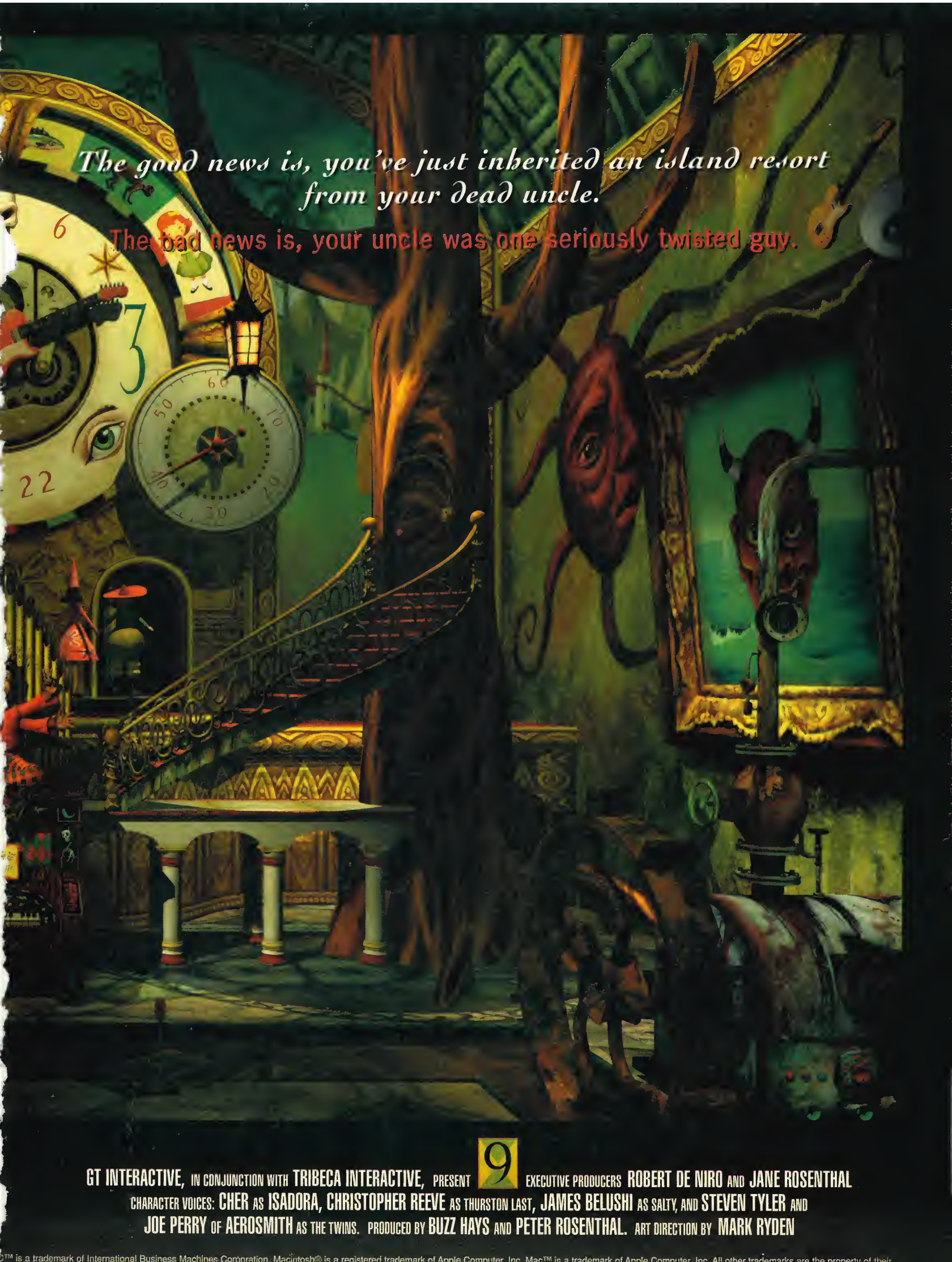
The Naming Of The Parts

Motherboards can have several different layouts - this is a fairly standard generic motherboard with no bells or whistles



NEXT MONTH
Part two of the PCR HANDBOOK takes you on a guided tour of your CD-ROM drive.





*The good news is, you've just inherited an island resort
from your dead uncle.*

The bad news is, your uncle was one seriously twisted guy.

GT INTERACTIVE, IN CONJUNCTION WITH TRIBECA INTERACTIVE, PRESENT

9

EXECUTIVE PRODUCERS ROBERT DE NIRO AND JANE ROSENTHAL

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Everything you ever wanted to know about...

FOOD

Join us for a joyous feast as we go in search of calorific content using CD-ROMs and the Internet.

The holiday season is winding down and it's time for a brief period of post-binge fasting. Ready? Hold your breath. One... two... three.

Okay, that's enough. Now let's get on to the serious munching. Wouldn't you just love to sink your teeth into that gorgeous mile-high sarnie above? What a treat that

would be, oh yes indeed. But we've had plenty of big treats over Christmas, so perhaps a smaller one is in order.

There's nothing like taking a spare moment to recline with a mug of your favourite hot beverage and slowly savour a biscuit. Or the whole packet for that matter. And on the biscuit front, the World Wide

Web has just the thing. *Biscuit of the Week* is the place to stop for top baked snack suggestions. When we logged on the favourite was the Cadbury's chocolate chip cookie. Treats appearing at Biscuit of the Week are rated on taste, crumb count, freshness, ergonomics, originality and, of course, that crucial dunkability factor. And ▶

WEB SITES

ALLIGATOR BOB
<http://www.gatorbob.com/>

BBQ HOMEPAGE
<http://edge.net/~markh/>

BISCUIT OF THE WEEK
<http://www.symetrica.com/biscuit/>

CANADIAN BISON
<http://www.ncbison.com/index.html>

CHILE HEADS
<http://neptune.net/images.com/~chile/>

CURRY HOUSE
<http://www.dwsmith.demon.co.uk/>

DINE ONLINE
<http://www.limitless.co.uk/dine/welcome.htm>

EPICURIOUS EATING
http://www.epicurious.com/a_home/aoo_home/home.html

FOODS THAT HARM
<http://foods.readersdigest.co.uk/extracts/features.html>

GOURMET RECIPES FOR THE CULINARY CHALLENGED
<http://www.eagle.ca/~lundie/recipes.html>

HISTORY OF CHOCOLATE
<http://www.godiva.com/resources/history.html>

HOW TO COOK A CROC
<http://www.salon1999.com/os/departments/feast4.html>

JOLLY RANCHER
<http://www.jollyrancher.co.uk/>

KELLOGGS
<http://www.kelloggs.com>

MIDNET ORGANIC
<http://www.midnet.com/midnet/organic/>

PREVENT FOOD POISONING
<http://ndsuext.nodak.edu/extnews/askext/foods/4212.htm>

TEA AND COFFEE PLANT
<http://www.demon.co.uk/london-calling/coffront.html>

TIME OUT NET
<http://www.timeout.co.uk/TO/>

SOAR
<http://soar.Berkeley.EDU/recipes/>

VEGGIE HEAVEN
<http://www.webserve.co.uk/Veggie/>



All the Web sites mentioned in this feature can be reached via PC Review's own Web site at <http://www.futurenet.co.uk>



Everything you ever wanted to know about...

FOOD

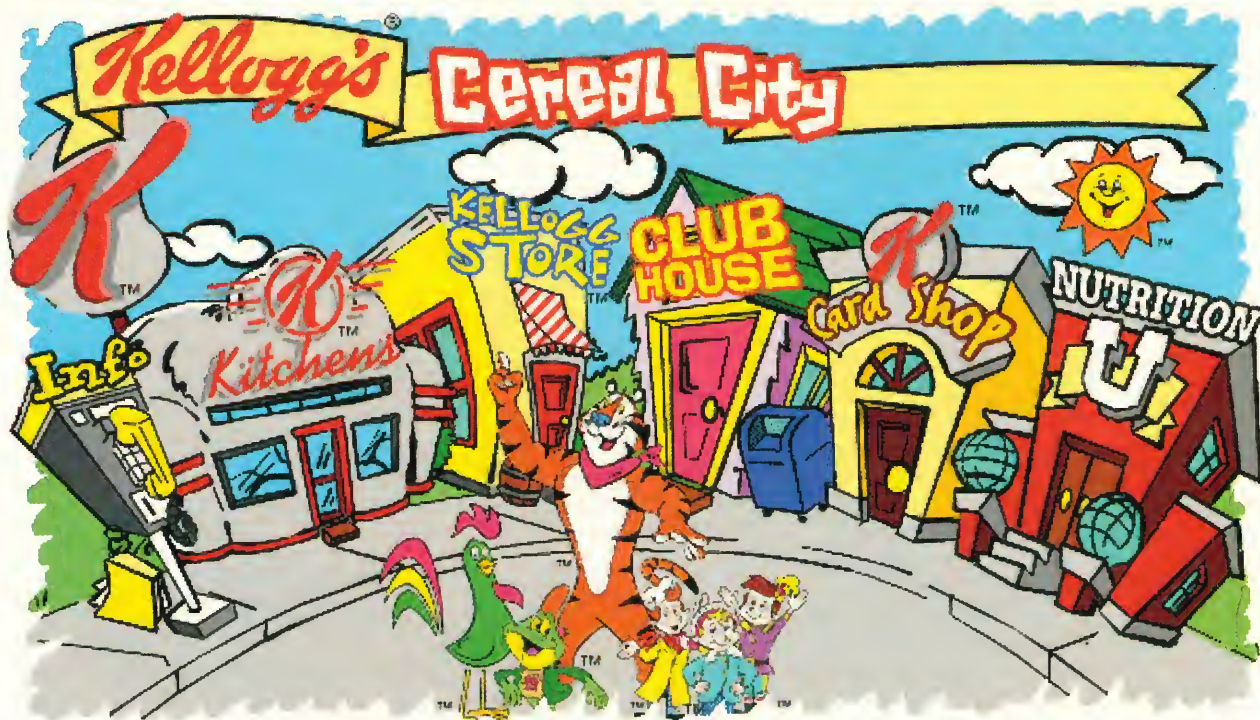
THE ADDITIVE CONSPIRACY?

"In Britain, some 3750 additives may be legally added to the food you eat; nearly 3500 of these are flavourings, which need not be specified in anything other than general terms by the manufacturers who use them. Fewer than 10 per cent of all legal additives are synthetic, and natural and synthetic additives represent less than 0.5 per cent of all the food we eat. Medical experts place additives a long way down the list of food additives, and so far only one person in about 1800 is known to have an adverse reaction to synthetic additives."

— from *Foods that Harm*, *Foods that Heal* Web page.

CHOCOLATE — THE FOOD OF LOVE

According to the *History of Chocolate* Web site, the myth that this food is an aphrodisiac dates back to the days of the Conquistadores. They witnessed the Aztec king Montezuma consuming chocolate before entering his harum and naturally assumed it was a potent food of love.



Stuck for snacking ideas? You shouldn't be. Biscuit of the Week suggests mouthwateringly good treats like these chocolate chip cookies.



An artist's impression of a bison steak. Lovely with mushrooms.

▶ to wash it down? How about the *Tea and Coffee Plant* where you can learn the history of these warming brews.

Chocolate, however, is the ultimate sweet treat. But, according to the *History of Chocolate* site, it's not the original sweet.

The Egyptians had their own special candies some 6000 years ago, and sweet meats hit the streets in 1566BC. It was the Mayans and Aztecs who discovered the value of the cacao plant. They called it xocoatl and in 1519 Cortez brought it back to Spain. A century later, chocs were being used as medicine. Not until mass production and the industrial revolution could it be enjoyed en masse in Europe.

One of the original uses for the home computer, as identified by Intel back in the 70s, was as something housewives could store their recipes on. Now 25 years have passed, and recipe CD-ROMs are, er... not quite all the rage, but anyway. One of the better looking ones is the *Elle Cookery Cards* CD. It contains 2000 recipes plus pictures of

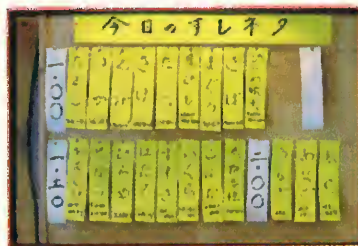
most of the dishes. *Recipe for Success*, meanwhile, also has 2000 recipes but is less lavishly styled. Both use large fonts, presumably so you can read the recipes on your screen from across the kitchen. Obviously, you can print out if you want.

Getting top marks for functionality is the *Swartz World Cuisine Recipe Book* on CD. Using it you can search for, say, all the dishes that take under 15 minutes to prepare, or plan a meal for 4 costing £2 – courgette sauté or smoked haddock quiche, it suggests. Alternatively, you can enter in all the ingredients you have in your fridge and it will

return all the meals you can possibly cook.

But there's a catch. Firstly, the *Schwartz* is sparse on graphics. Now this wouldn't matter so much if the disc had more than 200 recipes in it. There is the suggestion that users may want to add their own ones to the database... yeah, right.

Those requiring a more entertaining approach may be interested in *Julia Child's Home Cooking*. Here, the homely Julia



This is the menu at Cafe Japan. It translates roughly as: g'reats within. Kolchi Konnal is your chef according to Time Out Net's London eatery awards.

wheels in some courdon bleu talent in the form of several top chef to instruct you on the creation of several gourmet dishes.

CD-ROMs do as CD-ROMs do, and none is too daring. You won't, for instance, find the *Elle Cookery Cards* instructing you on the fineries of poached crocodile. For the very much en vogue practice of cooking strange and exotic meats, you're best off returning to the Web. The *Fresh Ostrich Meat*, *Bob's Gourmet Alligator*, *How To Cook Crocodile* and *Buffalo Meat* sites are all rather interesting.

Soaring above the rest

If you thought that 2000 recipes on a CD was good value, stop over at the immensely useful and immensely immense *Searchable Online Archive of Recipes* (SOAR) where you can browse through precisely 27,904 dishes from all over the world. Care for some *Arepas Rellenas Con Guiso De Carne* from Venezuela? Probably not. Then how about something simpler; something from *Gourmet Recipes for the Culinary Challenged*. This site teaches you how to microwave bacon and toast Pop Tarts.

Then there are the Beer Flakes. Just pour beer on cornflakes and – you guessed it – they're grrrrreat! Not exactly what the

Wild beasts on a platter - it's eat or be eaten

Supermarkets have recently begun stocking all sorts of exotic flesh for us to cook. You can get ostrich, wild boar and bison burgers. Even gourmet restaurants, if certain cooking shows are to be believed, will let you chew on something from the wilderness. Here are the best Web sites devoted to this most postmodern culinary trends...



Ostrich burger, anyone? The Fresh Ostrich Meat site suggested that we eat Big Bird. So we did. Very nice.



This is the ranch in Canada where bison go to be eaten. They love it. After all, bison is Canada's original red meat.



The Americans love their wildlife too. Alligator Bob's Gator sticks are hot and spicy and come in a jar.



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£14.99 Expert Software
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GOURMET DESERTS
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JULIA CHILDS HOME COOKING
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0345 002000

RECIPE FOR SUCCESS
£19.99 VCI
01923 255558

SCHWARTZ WORLD CUISINE RECIPE BOOK
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01480 496575

ALSACIAN STEW

Cut the meat into pieces the way you do for a stew. Put into a bowl with salt, pepper, 1 quartered onion, the garlic clove and the bouquet garni. Add the white wine, marinate for 12 to 15 hours. Slice the potatoes, take the onion and garlic out of the marinade and chop with the second onion, the carrot and the white part of the leek. Combine with the sliced potatoes, salt and pepper very lightly. Put the lard and half of the potatoes into a casserole, preferably an earthenware stewpot. Spread the marinated meat, the pig's trotter cut into four and the tail on top. Cover with the remaining potatoes, sprinkle with the



INGREDIENTS
TIME
TIPS
WINES

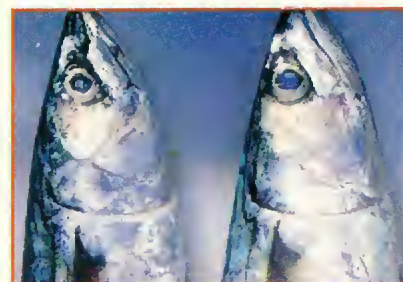
SUMMARY ■ RECIPES ■ A LA CARTE ■ CLASSICS ■ MENUS ■ GLOSSARY ■ TECHNIQUES ■

Print

Exit



The BBQ Homepage is represented by this freakish pig, which bears strange grill marks before even hitting the flames.



According to *Foods that Harm, Foods that Heal*, fish is a healthy bet.

Alsatian stew a la Elle Cookery Cards does not, you'd be surprised to learn, contain dogmeat. Pigs' trotters yes. But strictly no dog.

folks at Kellogg's had in mind. They're strict milk-and-flake traditionalists. And it shows at the Kellogg's homepage, one of numerous corporate sites attempting to market processed food. Of course, if you play the Shockwave plug-in powered Cyber Snackers at Cereal City you'll soon be hankering for some Special K. Of course. Jolly Ranchers also has a slick Web site.

SOAR might boast over 27,000 recipes, but one of the best all-round sites for lovers of food and cooking is *Epicurious Eating*. Billing itself as the site 'for people who eat food', it mixes top recipe ideas with suggested menus for all occasions and magazine-style features. Artichoke hearts figure heavily in the Valentine's Day menus, for instance. You'll also find tips on spotting and cultivating fresh herbs for the table.

If that sounds a bit like *The Good Life*, MidNet Organic goes the whole homegrown swine. It's full of ideas for people who like to nurture their grub before ceremoniously imbibing it. Here, you'll find a companion planting chart. Did you know that asparagus likes to grow with tomatoes, basil and parsley, but hates potatoes. Strange that, because it goes well with spuds on the plate.

Most plants hate being near garlic. Perhaps they fear being cooked with it. The people at the Garlic Information Centre,

however, lead the way were garlic agitprop is concerned. The pungent veg, according to the site, reduces growth retardation in pregnancy, reduces cholesterol levels and kills bacteria. Wonderful as they claim it is, the site fails to mention how garlic smells...

Hot and passionate

Even more devoted is the *Chile Heads* (that's chilli to we Brits) site. Here, you can find out about the world's hottest chilli pepper, the red savina habanero which tested an amazing 577,000 Scoville Units. (A measure, we're informed, that's hundreds of times hotter than an average chilli.) If you're such a glutton for bowel injury, there's always the *Curry House*, a homepage full of great curry recipes like balti, korma, madras, massala and the royal pasanda. There's also a curry house guide. Click on the map and a list of suggested Indian restaurants in that area pops up.

Dine Online, meanwhile, claims to be the independent UK restaur-



Does your chilli measure up to the Chile Heads' standards? This one's 5cm and about two million degrees.

rant guide. Independent of the North, more like. All restaurants it lists are in the south and many of the reviews, if not fawning, are a touch pompous. Other dining recommendations can be found at *Time Out Net*. Unfortunately, this only applies to London. However, if you are in the capital, you're directed to go to the Red Pepper in W8 for London's best pizza, or Café Japan in NW11 for the finest Japanese food.

And finally, a word on healthy eating. To make yourself aware of the latest dietary advice, *Foods the Harm, Foods that Heal* is a solid site from Readers Digest. Learn about

the additives conspiracy, or the decline in fish consumption. Meanwhile, in this age of ebola and e-coli bacteria, it's best to go on the offensive against food poisoning. This is the advice of *Food Poisoning: What's My Best Defence?* Such belligerent acts as refusing to buy dented tins or cracked jars, washing your food and putting things in the fridge will make things a lot safer. (GW)

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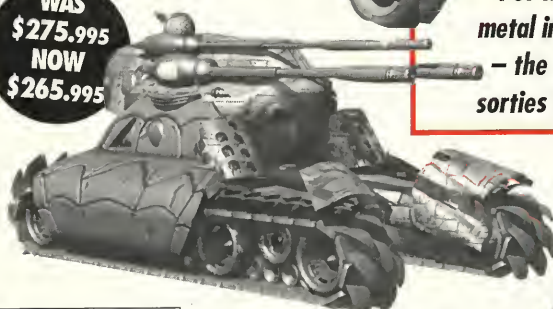
**JUST
\$40,000**



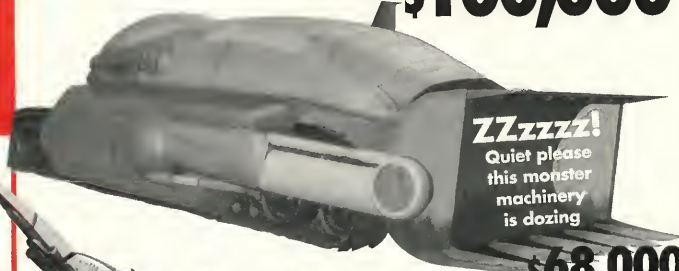
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\$265.995**



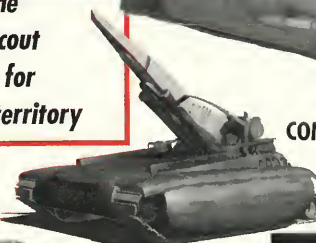
**REDUCE YOUR RIVALS
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easy fire, go anywhere
Mobile Artillery Unit**



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machinery
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1997

NEW YEAR RESOLUTIONS

1. LEARN A FOREIGN LANGUAGE
2. ORGANISE MY SOCIAL LIFE
3. GET ON TO THE INTERNET
4. RETOUCH MY OLD PHOTOS
5. START PROGRAMMING
6. MANAGE MY ACCOUNTS BETTER
7. CREATE SOME 3D ART
8. SMARTEN UP MY LETTERS
9. BEAT THE STOCK MARKET
10. MAKE SOME MUSIC.

**MASSIVE
10-PAGE**
guide to making
your dreams
come true!

YOUR 10 NEW YEAR RESOLUTIONS

Turn these resolutions into reality as we take you on a tour of your ten promises for 1997.

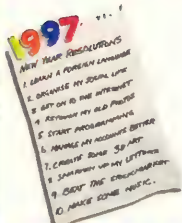
There's a reason you bought a PC and not a games console. And it wasn't just because you wanted to play your games in high resolution and across the Internet. You own a PC because you've convinced yourself that you can do more with it than just blow up aliens.

Every month PC REVIEW tries to broaden your computing experience, but this issue we've decided to

give you a bit of everything with this definitive list of New Year resolutions for PC users. These are the things you've always promised yourself that you'd do with your computer. Furthermore, for each resolution there's a full piece of commercial software to get you started (CD edition only). So, gather up all your resolve, turn the page, and load up CD REVIEW...

FREE GIFT!

If you bought the CD-ROM edition of PC REVIEW, you'll find ten quick tips cards mounted on the cover of the magazine. Refer to them while using the ten full commercial programs that you'll find on the CD.



1. LEARN A FOREIGN LANGUAGE

YOUR 10 NEW YEAR RESOLUTIONS

Spend less time playing games and learn a language instead. You don't even need to leave your PC...



Parlais vous Français? We thought not. Even if you answered 'oui', you're probably relying on your fading O level French. Otherwise, perhaps your name is Jean-Paul. Yet with the advent of CD-ROMs and the universal adoption of

speakers and sound-cards, PCs are fast replacing audio cassettes as the main study tool of anyone learning a new language. The fast talking salesmen on the High Street might be rolling off a few unconvincing foreign phrases to prove the computer's language tuition potential, but the fact is that universities up and down the country now rely on PCs to help teach vocabulary and grammar.

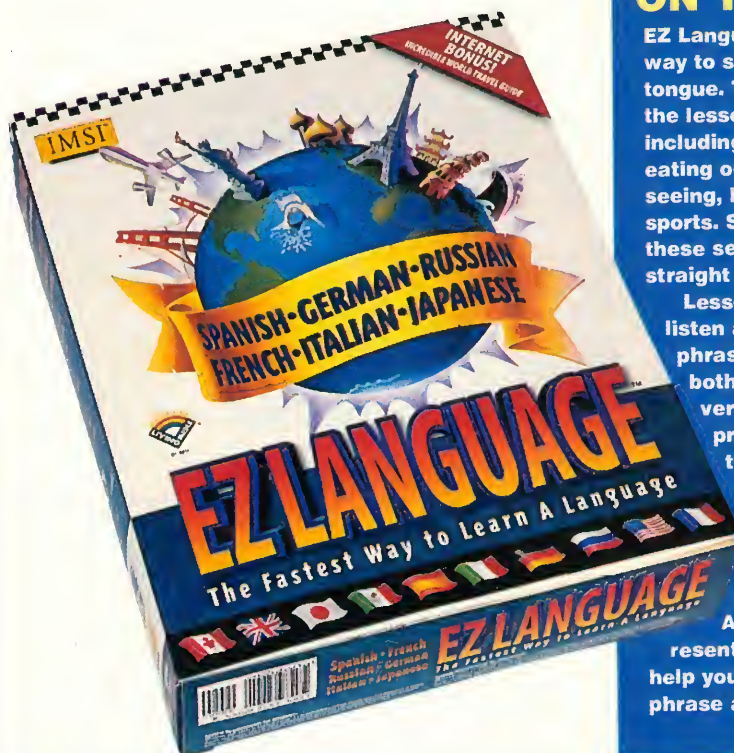
Indeed, computers are now an integral part of academic Modern Language courses. "Computers take the drudgery out of teaching," according to the computer-assisted linguistics expert Dr Anne Crick from the London College of Languages. "We can let them deal with repetitive things - like verb



Learn the Spanish word for cemetery now. If you're ever to use need it, you won't want a

drills - whilst us lecturers get on with the dynamic, interactive elements." You also can benefit from the same cutting-edge educational technologies from your home, without ever signing up for a language course. For example, Infogramme's Multimedia Language System was developed by professors and researchers at Syracuse University. It even comes with a microphone, and voice recognition software which will analyse your pronunciation and tell you how to correct it.

Dr Crick warns, however, that advanced as they are computers can't teach you everything. "Nothing beats getting out there and talking to the natives," she says. "Software is constantly improving, but can never replace real-life tuition entirely."



ON THE DISC

EZ Language is a very simple way to start learning another tongue. The main menu divides the lessons into eight areas including basic phrases, arrival, eating out, shopping, sight-seeing, hotels and public sports. Selecting any one of these sections moves you straight into a tutorial.

Lessons are conducted on a listen and repeat basis. The phrase is flashed up, with both English and foreign versions of the words printed on your screen, though you can turn off the printed English translations if you wish. The phrase is also spoken by a native you repeat it to yourself. A variety of pictorial representations are given, to help your memory file the phrase away.

SPEAKING YOUR LANGUAGE

Many PC language tutorials don't just talk at you - they'll listen too. By checking your pronunciation, they'll spare your blushes when you leave your bedroom for sunny Bordeaux. To speak to your PC, you'll need a microphone. The mini stereo microphone from Innova costs just £7, a bargain compared to the price you'll

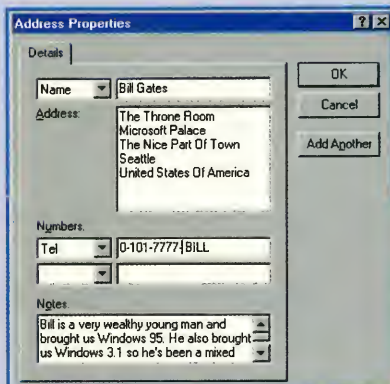


Most voice recognition language software comes with a microphone. If yours doesn't, try this one from Innova.

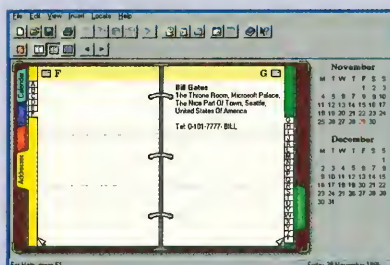
2. ORGANISE MY SOCIAL LIFE

GETTING IT SORTED

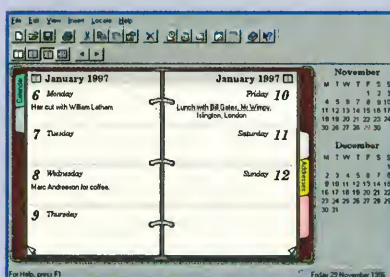
Here's how to get started with a PC digital diary. You'll never wear those shiny silver trousers to a wake again. Unless you plan to, of course.



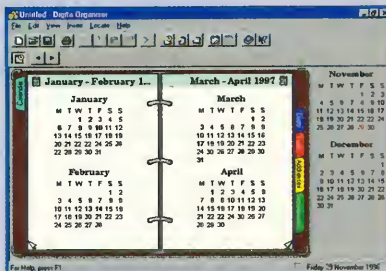
1 Everyone, important or not, deserves a place in your on-line organiser, since retrieving their details is simplicity itself. Address books are stored as mini-databases and adding a new person merely entails editing a few fields. So get 'em all in.



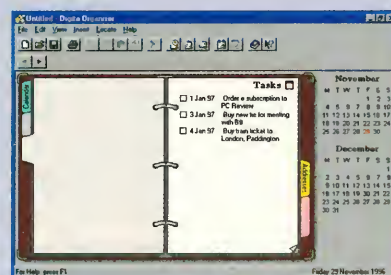
2 The new address in all its glory. Many organisers include an auto-dial facility, so that you can double click on a telephone number to start your internal modem a-whirling. Not much use with a voice number, of course, but handy for electronic faxing.



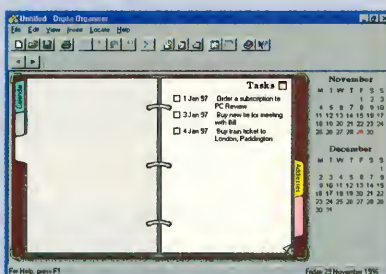
2 To add an appointment to the diary, double click on the day. When you've made a new entry, most organisers enable you to link it into the appropriate page of your address book, can have their details on hand too.



4 Any dates that are associated with diary entries are automatically emboldened in the calendar view. This enables you to check all your commitments at a glance. Double-clicking on a date takes you straight to the relevant entry in the diary.



5 Another handy facility is the electronic to-do list. With most PC digital organisers, these can be linked into the diary, so that as your deadline for a particular commitment approaches, you'll be forewarned.



6 Digita Organiser, which you'll find on CD REVIEW, comes with extra information that you can add to the package as necessary. We decided we needed to brush up on our computer knowledge, so we loaded the 'History of Computers' supplement. Other supplements include public holidays, and numerous sporting histories.

You know the villain who sits before a bank of monitors, stroking a cat and managing his empire with the occasional flick of the wrist? That could be you.

There's a lingering misconception in the public consciousness. It is evil and it must be purged. The falsehood states that the average PC owner doesn't have a social life, let alone one that needs a computer to manage it.

We, however, know this to be utterly untrue. With heavy schedules full of journalistic engagements, in addition to our ever-encroaching deadlines, we have plenty to do, and plenty of need for some PC powered help at managing our time. Everyone does, these days.

Whereas once you had to cram a two pound FiloFax full of extra paper, now you can keep your appointment details hidden inside your desktop PC. You can pack a modern organiser with information on all your friends, including active links to their Web sites and email accounts. You can even schedule meetings to rub their faces in it.

Indeed, today's personal data managers come with a whole host of integrated features. You'll get a diary, a to-do list, an address book and a notepad straight out of the box. Even the lower-end pieces of software include clever tricks like modem auto-dial and cross-organiser integration, enabling you to, for example, link a diary entry to the details of the person you're meeting. And if you have a PC in your office, you can usually synchronise your home and work organisers. So you'll never wonder where you are again.

PDA MADNESS

Another handy way to manage your time, particularly if you're on the move, is with a Personal Data Assistant (PDA). They're not new, but with more powerful processors and improved comms facilities, PDAs are finally becoming increasingly handy. Microsoft's new operating system for palmtops – Windows CE – is likely to further help their case. (We'll take a look at it in a future issue of PC REVIEW.)

For further information on PDAs call Psion on 0990 143050 and US Robotics on 0800 225252.



No need to walk around with an unsightly bulge. Is that your personal organiser or...

3. GET ON TO THE INTERNET

THREE THINGS TO DO WITH YOUR FREE INTERNET ACCOUNT

If any mail has arrived for you, the 'Mailbox' icon at the bottom of the Turnpike display will be flashing. To see this mail, double-click on the Mailbox icon. The messages that have arrived will be listed in the upper part of the mailbox display. To read a message, double-click on it. When you've finished reading it, close it and open another.

SUBSCRIBE TO AND READ NEWSGROUPS
There's far too many Newsgroups for you to download them all. Instead, you make a list of the ones you're interested in. To do this, select New NewsStand option from the File menu. Type a suitable name for the NewsStand in the Name slot, then click OK. Now click the Add button at the bottom of the NewsStand display. Select newsgroups by picking them one by one from the list in the upper part of the dialog and 'Adding' them to a list in the bottom part. When you've selected all the newsgroups you want, click OK. New articles will be collected next time you connect to your Access provider.

SEND AN EMAIL
Select your mailbox then click the Start new email button on the toolbar. Simply fill in the email address of the person you want to write to in the 'To' slot; fill in the subject in the 'Subject' slot; and type the text of your message. When you've finished preparing your message, click the Post button on the Editor toolbar and confirm. The message is then put into your Out tray. It will be sent out across the Internet the next time you connect to your Access provider.

EXPLORE THE WEB
To explore the World Wide Web from Turnpike, run the Connect program, connect to your Access provider - then click the WWW button on the Connect program toolbar. This takes you to the Starting page. This and other Web pages contain underlined items, which are links to other Web pages or facilities. To call up any of these pages, simply click the underlined word.

You don't need chunky manuals and a bad complexion to get on-line, just read this page and boot up CD REVIEW...

Ten Steps to the Internet with CD REVIEW

You nod knowingly when your friends discuss the Net, whinge about slow access times and guffaw about the porn debate but you clutch to your heart a dark and hideous secret. You're still not connected. Why? Service providers are falling over each other to

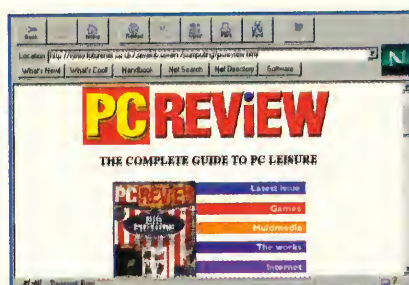
get you on-line for nothing. Modems have never been so cheap. And this must be the most exciting time to get on-line. You want to be able to tell your grandchildren (via HoloPhone) that you were there in the beginning, don't you?

- 1 Before going on-line, you need to get an account with an Internet Service Provider (ISP). If you're going to take advantage of our free 30-day Demon account offer, check the help files on CD REVIEW. An account with an ISP is your on ramp to the so called super highway. It also gives you some real estate on the Internet (well, an address), so that people can send you emails.
- 2 Attach your modem to your PC. Then run the Install program from the works section of CD REVIEW. This will install Turnpike and Internet Explorer.
- 3 Next you will see a dialog box asking which WINSOCK.DLL you will be using. The NTS Winsock supplied with Turnpike is selected by default - don't change this unless you have a good reason to choose use a different version of Winsock.
- 4 You can now choose to restart your machine. Probably a good thing to do as this allows your new settings to take effect. Only after you restarting will you be able to connect to the Internet.
- 5 The Connect program runs automatically when you restart. First you'll see the 'Sign-on' dialog, where you type your email name. For instance, if your email address is fred@hostname.demon.co.uk, sign on as 'fred'. Below the sign-on name is a password slot. You don't need to set a password unless you want to. For further advice, at this stage, press [F1] to call up Turnpike's on-screen Help.
- 6 You will now see a list of Access providers. If you are taking advantage of the free 30-day trial of Demon, then choose Demon Internet (remember, you must set up an account first).
- 7 Turnpike offers you a list of supported modems from which you must naturally choose the one you have - or at least one that is similar to yours. If you are uncertain which to pick, click the Help button shown alongside the list and follow the advice given there.
- 8 The 'Dial Settings' dialog box appears. Check the dialling information given (in

particular, the Point of Presence that's selected). Enter any additional codes that will need to be sent (from a PABX for example), and set the modem port and the modem speed. Again, click the Help button for advice on what to set.

9 Now Save these settings. Turnpike now asks for your full name, then display its Connect dialog box for you to connect to your Access provider. Simply click the Connect button and you're away. Turnpike collects news (in this case, a list of newsgroups) and picks up any mail already waiting for you.

10 When Turnpike tells you 'News collection closed', you can disconnect from your Access provider (by clicking the Disconnect button) because Turnpike has now downloaded all the information it is going to take. We recommend that you now load the main Turnpike program - to set up one or more NewsStands for the Usenet newsgroups you want to follow, and prepare any mail messages you want to send. Simply click on the Mail/News button on the toolbar.



You'll find a familiar face on the Internet at <http://www.futurenet.co.uk>.



Yahoo! is a search engine. It's a good place to look for interesting new sites.



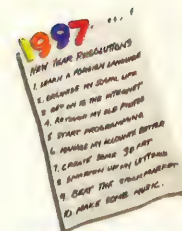
You'll soon find the Web caters for every taste. And especially some poor ones.

Which Modem?

You could spend days comparing modems. Weeks, months, years, even. Don't bother, just buy the US Robotics Sportster, which we recommended in our modem round up in our last issue. For once, the best-selling product - which won our essential logo - is also actually the best. At 33.6Kbps, it's fast, and offers full voice, fax, data and caller ID facilities. It looks great and is universally compatible. As our Technical Editor Mat Broomfield noted, "It's tedious to keep praising the leading product, but when it's this superbly designed and constructed, you've got no choice." The Sportster costs £199. Call 01734 228200 for more details.



4. RETOUCH MY OLD PHOTOS



YOUR 10 NEW YEAR
RESOLUTIONS

You can make much more of your happy snaps with a scanner and a bare bones image retouching program

Okay, so the average women's magazine pays £1500 to have its cover image retouched, but you needn't spend a pile of dosh or waste valuable sleeping time learning new skills to produce some great looking images on your PC.

Your holiday snaps are an ideal starting point for image editing. One average snap can produce a multitude of dramatic personal images you can use to customise your Windows' Desktop, enhance your programs, personalise your Web pages and even add to email

stationary. Only your imagination sets the limits. To get you started we've included Serif's PhotoPlus 1.0 on CD REVUEW.

This package is designed to combine photo scanning with image enhancement, colour correction and effect filtering. There are no tricky-to-use or complex tools to learn – all you have to do is click on the buttons. If you don't like the result there's an Undo button and even a Reload Original Image button.

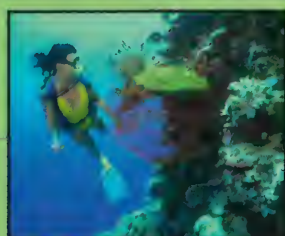
Our sample image, for instance, lacked contrast, sharpness and immediacy. We first cropped it to make the swimmer fill

the frame. Then we used the Sharpen filter to tighten it up a little and finally applied some of the basic effects to show what you can quickly achieve.

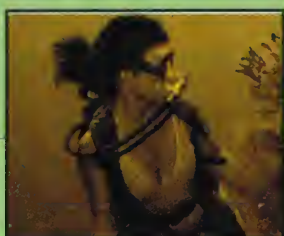
The tools we used for each image are shown on the image, though we did play with the contrast and brightness a little as well. Double clicking a PhotoPlus button brings up an explanation and in some cases a slider bar to adjust the effect.

When you've seen the brilliant results you can get, you might want to try some of the more complex techniques available in programs such as Paint Shop Pro 4.

Diving into PhotoPlus – your quick-start tutorial



1 Our original, overly large image was loaded into PhotoPlus. The program automatically reduces the display size to fit the frame, though you can override this feature. We used the cropping tool to select the part of the picture we wanted to work on. Next, we saved the cut down image under a new name and began editing it.



2 The first thing we tried was with the Sepia tool. This reduces the image to shades of grey and then apply a brownish-orange-yellowing colour wash to the whole thing. The resulting image has an antique, olden days look to it which can be extremely attractive for portraits, landscapes and even machinery. Obviously, however it is totally inappropriate for our diver.



3 This version of our swimmer was created using the Emboss tool first of all. This throws away the colour information again and uses edge detection to produce a chiselled look. We added a little contrast to the image to make the lines more solid and then increased the blue content of the image to give it an electronic look. Getting better.



4 A series of effects were used here. First, we Posterised and then we Histogram Brightened to bring out detail in the dark areas. We increased the brightness and added Solarisation. You can alter the results with tiny changes in the settings. You can create further effects by turning the Image negative and then solarising it. Nice.

CHOOSING A FLATBED SCANNER

Flat bed scanners are your best bet because they enable large images to be scanned as well as objects which aren't truly flat, such as books and magazines. This is hard to do with a hand scanner. Similarly, a flatbed scanner works much more accurately, enabling you to get more consistent results.

1. Deep breath... the bed itself should be at least A4 in size scanned in one pass at 24-bit or 32-bit colour with a true optical resolution of at least 300dpi by 300dpi (dots per inch).

2. Make sure it comes with 32-bit Windows 95 drivers. This greatly extends its usefulness by enabling many programs to use it directly.

3. Choose a scanner with its own interface card rather than one which connects to a serial or parallel port. Ideally, buy one with a SCSI interface which can be used for other devices as well. It's well worth a little extra in terms of future-proofing.

4. If two scanners are similar but one comes with a professional editing program, buy that one. *Picture Publisher*, for example, is often bundled with scanners and greatly increases their possibilities.

5. Don't pay more for a high scanning speed if you're going to be the only user. It isn't worth paying hundreds of pounds extra to save a few seconds scanning here and there

when you'll probably spend hours working on the results when the scanning's done.

6. Although you may not need it right away, buy a scanner you can be extended with a transparency scanner, paper feeder or any other bolt-on goody you may one day need.

The Black Widow ScanPro 2400 SP won our scanner round-up back in May 1996. Call Devcon for details on 01324 825999. We'll be testing a new set of scanners next month





YOUR 10 NEW YEAR RESOLUTIONS

NEXT MONTH
We'll bring you a working demo of Visual Basic 4.0 to try for yourself.

5. START PROGRAMMING

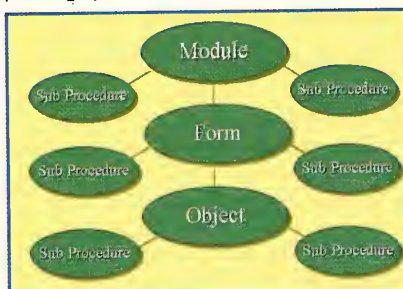
Programming is like driving. You can do it fast, illegally and you get to control of massively powerful machine...

With the first home computers, you couldn't avoid programming. The BBC, Spectrum, Commodore 64 and Dragon 32 all had operating systems

that included run-time code interpreters. No kid could resist typing:

10 PRINT "This computer is bust!"
20 GOTO 10
into every display machine at Dixons. A generation of home programmers was born, some of whom became some of the richest characters in the software industry.

Things began to change with the Amiga and ST as with them you had to write your program in a separate text editor, then run it through a compiler and debugger. But most



The Visual Basic tutorial on this month's CD REVIEW explains the principles of programming from the bottom up.

machines came with a bundled language and it was still possible to code a complete game in your bedroom.

Today, most PCs are sold without a language and there's a widespread belief that you can't get results without a 50-strong development team. This is non-

sense. Great shareware programs are written every year by home users, either for fun or profit. In addition, modern programming languages are simpler and more powerful. For instance, *Visual Basic* is intuitive and easy to learn, yet its high level OLE commands make tasks such as windowing or multimedia input straightforward.

Indeed, many developers worry that the proliferation of consoles and the expense of PC ownership might stifle home-grown programming talent. Sony is even releasing a programmable console this February (the jet black Yaroze) to try to promote new talent. So with a little enthusiasm and practise – starting with the *Visual Basic* tutorial on CD REVIEW – you might suddenly find your hobby is a marketable skill.

6. MANAGE MY ACCOUNTS BETTER

You can unlock the other mysteries of your bank balance with a home accounts package like MoneyBox 4.1...

For most of us, managing our money would mean buying less PC kit for starters. But your computer can help you sort your finances rather than just swallowing them. Indeed, it's now possible to entirely manage your bank

account from your own home (see 'On-line Banking comes Home', PC REVIEW, Issue 63.) You don't need to abandon the high street entirely to get a Window on your accounts. Regular use of any financial management package like

Quicken, Money 97 or MoneyBox 4.1 (on CD REVIEW this month) will help you understand all your accounts, and thus work out where your incomings are going to. You'll be as happy as Scrooge counting out his coppers...

Money Matters

It might be funny in a rich man's world, but for us money is a serious business. Here's how to get started with MoneyBox 4.1, the home accounts package brought to you by PC REVIEW and the MoneyBox corporation.

1 MoneyBox 4.1, which you'll find on this month's CD REVIEW, is a typical home account's package. It's straightforward to use, and you'll find full assistance in the Help files. Before you begin, make sure you have your most recent bank statement to hand.

2 Obviously, when you install the system it doesn't know anything about your current financial situation. So you must first specify your opening balance, and whether you're in credit or overdrawn.

3 Now insert every item from your statement. Select Receipts or Payments to determine whether the amount will increase or reduce your balance. The more information you can supply, the more powerful your final on-line accounts will be.

4 You will now have to enter the statement number, balance and

whether you're in credit. In future, the system will calculate these for you. The statement window should, if you've entered everything correctly, now show the same information as the Bank statement, including opening and closing balances.

5 Next, select the Reconcile button. You will now see all the items not yet included on a Bank statement, starting with the closing balance of the statement you have just reconciled. Note that any incorrect entries can be altered using the Change button.

6 MoneyBox 4.1 enables you to search for a specific payment, so try the feature now. This is handy if you find yourself locked in disputes over a particular purchase, bank withdrawal, or even just to compare telephone bills. It certainly beats rooting about in stuffed shoe-boxes for long lost but not yet forgotten receipts.

7 The Account Names List details all your accounts by name. It can also be displayed with the debit or credit balance of each Category, Summary and detail account shown in columns alongside the account names. Thus you can see where your money is going at a glance.

8 You can change details like the End Year Month to suit your own financial situation. For instance, you might want to run your books in parallel with the financial year, in which case you'd change the Year End month to April.

9 Another convenient tool in MoneyBox 4.1 is sorting. This enables you to pull out all the items relating to a particular type in order to produce a mini-statement. Want to know how much you spend on hi-fi equipment every year? Are you sure? How about counting every penny you've put into your PC system?

7. CREATE SOME 3D ART

Don't be intimidated by mathematics behind pre-rendered graphics. Just follow our Imagine 4.0 tutorial...

Image is a very powerful rendering system that is capable of generating both realistic still images and complex animations.

In an attempt to simplify the various stages of object creation, manipulation and rendering, *Imagine* uses a modular approach. There are several separate Editor screens, each designed for a particular purpose. Knowing which Editor to use is half the battle

when you're trying to learn how to use *Imagine 4.0*.

Rather than creating an object from scratch, in this tutorial we are going to use one of the example models shipped with *Imagine*. This isn't as bad as it sounds. Many rendering artists use predefined objects, and there are plenty to choose from on CD-ROMs and the Net. We will therefore only need to use a few of the editors: the Project Editor to

create and manage our rendering project, the Stage Editor to position it, and the Action Editor to adjust some external parameters. The object used here is a skull, which has already been suitably coloured and textured. Although we are only going to render a single still image, it's relatively straightforward to create an animation – simply add more frames in the Action Editor, and apply an Effect (such as Rotation) to the skull object.

Step 1: Create the Project

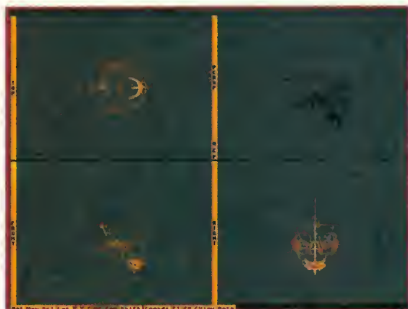
When *Imagine* starts, it defaults to the Project Editor. From here you create new projects – in reality a new directory on your hard disk which contains settings from your scene, plus any objects and rendered pictures. Use the New option from the Project menu to create a new project: Skull.



Create a new project: this will hold your scene details and any rendering images

Step 2: The Stage Editor

Move to the Stage Editor (use the pull-down menu on the left). Initially there will only be a camera present. Load the Skull Object from the Objects directory. It's in the DigiMax drawer and called SKULL.OBJ. Use Load from the Object menu and the default settings.



The view at the top right is a special 3D preview window. Try clicking in the A or Z boxes, holding the left mouse button down and wiggling it about.

Step 3: Manipulations

Select the skull by pressing [F1] and it will go purple. You can now move, rotate and scale it using the buttons at the bottom of the screen and by moving the mouse with the left button held down. Use the Axis buttons to restrict movement or select the direction of rotation.

Step 4: Camera

The camera is already present, but needs to be moved and pointed in the right direction. Press [Alt] and N until the camera is selected,

then hit [F1]. Now move it to where you want it. Press [Alt] and K and enter AXIS.6 and select Camera View from the Display Menu.



You can move the camera around freely, but make sure the Camera View option is set so you can 'see' through it.

Step 5: Lights

Until you add a light source, it will remain dark. Use the Object Menu to Add a light source. Select it with [F1] and move it to a suitable location. Remember to use [Alt] I and O to zoom in and out. We can make do with one light source for this scene.

Step 6: Action!

Now Save Changes from the Project menu and go to the Action Editor. Click on the reddish square beside Globals to open up this requester. We'll add some ambient lighting, adjust the colour of the sky and switch on the stars so copy these settings. You can always change them later.

Step 7: Full Render

Save changes again, and return to the Project Editor. Click on New under 'Rendering Subproject'. Pick a name, and define the type



The quality of this object makes any render interesting: notice though how the lighting brings out the detail.

and size of your final render. Scanline mode, and the default size and file type will render quickly. When finished, click on the '1' to select that frame and Show.

Step 8: Finishing Touches

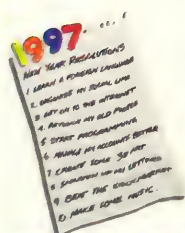
There's plenty more you can do to improve the image. From the Action Editor, select the light source and switch on shadows and lensflare. Add a Lensflare effect to the Globals item. Then add a plane to act as the ground, and use the Trace rendering option for an impressive scene.

Adding a ground and some global effects such as lensflare makes all the difference, not least to the rendering time! Spooky.



8. SMARTEN UP MY LETTERS

Become an epistolary expert overnight.



YOUR 10 NEW YEAR RESOLUTIONS

Laser printers have a lot to answer for. Together with the widespread adoption of word-processors and DTP packages, they've turned us all into designers overnight. And the results have been, quite frankly, atrocious.

Write your letters in a ludicrous novelty font and you might as well have used a potato stamp. Squash the words to the top of the page, and you'll look like you've run out of things to say. In print, laziness comes across as tackiness. Instead, spend half an hour creating a proper template. Even personal communications will benefit from consistently classy stationery.

Most packages enable you to create templates. These are simply partly complete documents that contain standard letter components like your name, address and other details. Templates are read only, to prevent you accidentally altering them.

Also, does your word-processor come with a skeleton letter or a wizard? If so, most of the work has been done for you. Otherwise, create a consistent address header, in a different font to the letters body text. The body should be in a serif font for clarity. Use rules in headers and footers to add extra emphasis and ensure that the letter is centred vertically. Finally, invest in some decent paper. Water-marked Conqueror is a good choice.

A well-selected piece of clip-art, worked into the template, will ensure your letter stands out from the crowd. CD REVIEW features the word processor from Complete Works Lite for free.



9. BEAT

You can now monitor shares on your PC, sell them over the phone and turn a healthy profit. And you don't even need braces.

Everyone knows the stock market outperforms high street banks and building societies when it comes to giving you returns. So why do we keep putting our money in deposit accounts? It's probably a combination of laziness, ignorance and a fear of losing everything trying to compete with the big professional brokers.

Of course, we're here to tell you that's nonsense. In fact, you'll find all the tools you need to rock the markets on this month's CD REVIEW. UpData *Teleshares* enables you to analyse share performances, compare pricing against its past history and spot the leading buys, as well as highlight those that are under-performing. Let's see how it works in practice with a peek into the week in a life of a cyber trader.

MONDAY

I bring *Teleshares* up to date with the upData Web site at <http://www.updata.co.uk>, via the data section. I then decide to look into *Teleshares* off-line. I create a custom portfolio of popular blue-chip stocks, such as the privatisation shares, and then carry out a leaders and laggards to what's promising. I notice one of these shares is up over two per cent and look at in *Teleshares* graphing. It just might be heading for a breakout.

FULL PROGRAM NOTEBOOK

Here's your guide to the 10 full programs offered on CD REVIEW. Including essential information such as contact details and how to upgrade to newer versions.

IMSI EZ LANGUAGE 1

Why not upgrade to EZ Language 2? It contains six languages - French, German, Spanish, Italian, Russian and Japanese - and is offered to PC REVIEW readers at a special upgrade price when you register version 1. You can upgrade for just £31.08 (£19.95 plus delivery of £6.50 and VAT). The normal RRP of EZ Language 2 is £49.95 + VAT. What a bargain. To order phone 0181 581 2000.

DIGITA ORGANISER 1997

To receive technical support for *Digita Organiser*, you must first register your copy with *Digita International Limited*. Either select 'Register Now' on opening the organiser, or select 'Help' and then 'Register Organiser'. There are several methods by which you can register. Email: orgwin@digita.demon.co.uk Compuserve: 100031.3032 (with 'Organiser for Windows' in Subject line). CIX: *digita* (with 'Organiser for Windows' in the Subject line) Phone: (UK only) 0891 616 944 This telephone line is available to registered *Organiser* users from 11am until 5pm. Calls are charged at 38p per minute cheap rate and 48p per minute at all other times. Be sure to get permission from the telephone's owner before calling, just in case. Fax: 01395 268 893 Post: *Organiser for Windows Support* *Digita International* *Black Horse House* *Exmouth* *Devon* EX9 1JL

HOTMETAL LITE

To order an upgrade to *HotMetal Pro* Version 3.0 (with automatic file import and conversion, easy to follow sample pages, templates and CGI scripts plus 90 days free technical hot-line support) at the special price of £59, phone 01734 814230.

PHOTO PLUS 1.0

Call 0800 978 7070 to register your copy of *PhotoPlus 1* and take advantage of some great offers. Firstly, you can get your hands on *PagePlus 4* (msrp £99.95) and *DrawPlus 3* (msrp £59.95) for a combined price of just £99.95. And if you order at the same time as you're registering *PhotoPlus 1*, Serif will also throw in 17,000 clip art images (msrp £49.95) for free. When you call don't forget to ask for details of other offers for users of Win95 and Windows 3.1.

INTRODUCTION TO VISUAL BASIC 4.0

Phone for a free brochure and further information on BVG's range of over 300 software training videos and interactive CD-ROMs which cover all the popular packages. Prices start from £14.99. Call BVG on 01874 611633.

MONEYBOX 4.1

You can buy a *MoneyBox 4.1* manual and full access to the *MoneyBox* helpline for only £12.95 (+ £2.00 p&p). The 100-page manual promises to turn you into a *MoneyBox* expert overnight. To order, phone the *MoneyBox* hotline on 01625 539 494 or fax 01625 539 502.

IMAGINE 4.0

Impressed with our *Imagine 4.0* give-away? For just £49.95 you can upgrade to a special Windows version of

Imagine. This new program offers considerable advantages in addition to its support for Windows 3.1 and 95. With increased screen resolutions, virtual memory, a 2D to 3D per cent increase in speed, full multimedia and improved animation controls, *Imagine* for Windows SE is a formidable 3D program. RING THE IMAGINE HOTLINE ON 01225 822511.

COMPLETE WORKS LITE

You can get the full version of *Complete Works Lite* for just £19.99 + carriage, saving £10 off the normal price. (Offer ends 28 Feb 1997.) You'll get unrestricted versions of all the apps, 100 fonts, 1000 clipart images, 115,000 word dictionary, 800,000 synonym thesaurus and one month free telephone support. Phone: 01453 753955, Fax: 01453 753933 or Email: info@toplev.com

TELESHARES

For further information contact... Phone: 0181 874 4747 Fax: 0181 874 3931 Post: Updata Software Ltd, Updata House, Old York Road, London, SW18 1TG Email: helpdesk@updata.demon.co.uk

EVOLUTION MIDI

If you want to upgrade to *Evolution Audio Pro* it will cost you a special reader's price of just £60 including VAT and postage and packing. Order by post, telephone or email. Telephone: 01525 372 621 Email: sales@evolution.co.uk Post: *Evolution Electronics Ltd* 8 Church Square *Leighton Buzzard* *Bedfordshire* LU7 7AE



THE STOCK MARKET

It needs to rise another ten pence to be into new ground. I will keep a close eye on that this week.

TUESDAY

I carry out my morning download, come off line and upload the prices into *Teleshares*. Following the guidelines of 'finding shares to buy' I check the leaders and laggards from the Display menu. I note stocks that are improving despite the weak market. I also study the top 20 and find those about to break out or turn around. I also have a handful of shares from privatisation issues. One is coming to the end of a good run and needs close attention. Two are moving up, but two are really under-performing. I resolve to bite the bullet and sell these today with a view to re-investing.

WEDNESDAY

Again, I collect data from the upData site. The privatisation share

that I was concerned about has fallen sharply, as have the two I sold yesterday. My other two are broadly unchanged, showing resilience in a weak market.

Anyway, the share I am watching has fallen through the stop-loss I placed on

it. I sell the share and buy the best looking blue

chip

stock. It's a well known company

and having

moved sideways for a

few years in a strong market, it has just broken out. If it continues to rise, I'll make money. If not, at

least it should hold.

THURSDAY

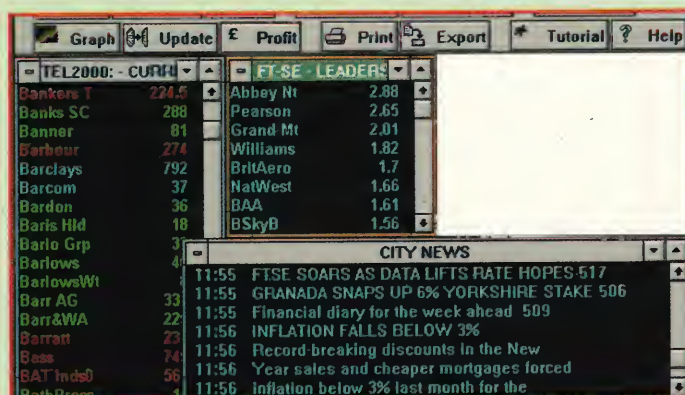
Today I look at the *FT* site for news and market reports, and then the *LIFFE* and *Moneyworld* sites to understand further market sentiment. There are several shares that feature strongly on these Web sites. To prove to myself that this would be chasing value that was already counted into the market prices, I started to track a third portfolio on *Teleshares* for these shares.

FRIDAY

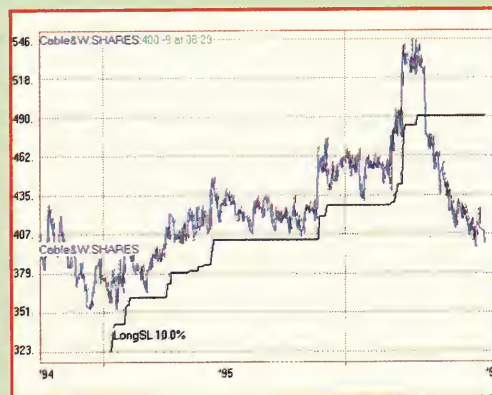
The graphs for the tipped shares did not look up when I updated *Teleshares* this morning. I resolve to look for bargains today and five likely graphs. I decide to buy two, but cannot decide which ones. I decide to paste these into my word processor, then print them out and study them from time to time throughout the day. The other share graphs had changed little on a quiet day in the market and so I was happy to leave my portfolios unchanged. Eventually, I decide which two to buy and send an e-mail to my broker this afternoon. I can't wait to track them next week. But now, it's the weekend and the markets are closed.

WARNING

Please remember the price of stock market investments and the income derived from them can go down as well as up. If you are not sure what to do when considering investing, please get professional advice. Examples given here should not be taken as a recommendation to buy or sell.



Teleshares opens a window on a wealth of information... about wealth.

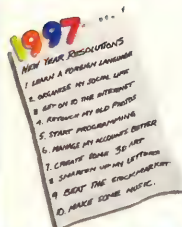


Track shares and re-invest after looking at this graph.

MONITORING YOUR SHARES USING STOPLOSS

Stoploss is the best way to keep losses small and run with profits. The stoploss indicator only moves up when the share price exceeds a recent peak. The stoploss spends most of its time going sideways, and the end of a profitable run is triggered when the

share price falls through the stoploss. The stoploss can be set to any level, and means that your loss should not exceed that level. Once your shares start rising, the stoploss helps you to lock in your profits. It takes the emotion out of making selling decisions.



YOUR 10 NEW YEAR RESOLUTIONS

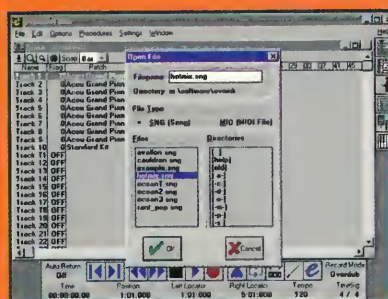
10. MAKE SOME MUSIC

Why shell out for an expensive violin, only to discover you have no innate musical talent and that your PC can do the job just as easily!

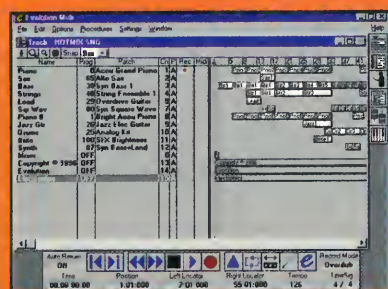
It's a strange but true fact that most new PCs still come with the PC's original sound support as standard – and a sound card as an added extra. The bare bones of PC sound, the internal speaker now sounds over a decade old and can't even belt out beeps to match, let's say an ancient Sinclair Spectrum. But nobody really makes do with the PC speaker any more do they? The latest wave of sound cards puts the power of a whole

orchestra into your humble PC. Power that even professional technicians would only have dreamt of accessing as recently as five years ago. With all that oomph under the hood, it's positively rude not to give music creation a go. With only a modicum of musical inspiration, a minimum of one ear and CD REVIEW it's possible to make your own music. Follow our ten steps to sonic heaven...

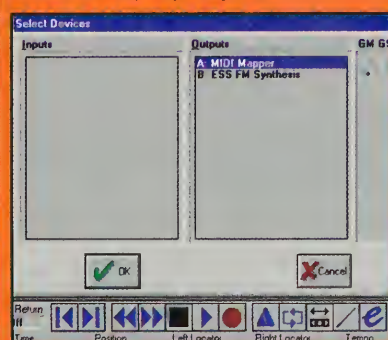
MAKING MUSIC IN 10 EASY STEPS



1 Install Evolution MIDI through the CD REVIEW menu. Once you're in, move your mouse to where it says File at the top left hand side of the screen. Choose Open, and open the HOTMIX.SNG file which is in the Evolution MIDI directory.



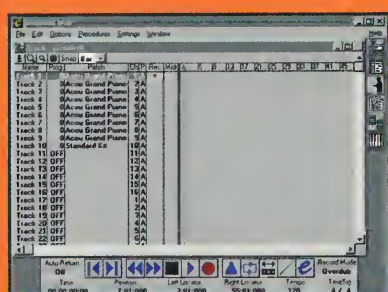
2 The song will appear in the track window. Click on the Play button on the transport bar at the bottom of the screen. We will now create a similar song by using some of the easy music tools of Evolution MIDI. If you cannot hear any sound, please go to Step 3. Failing that, read the FAQ (Frequently Asked



Questions) section of the Help file and then continue this guide.

3 Using the mouse, move the pointer to where it says Settings at the top of the screen and click with the left mouse button. Select the Devices option. Then in the Outputs column, click on one of the driver names and then click on OK. Play the song again. If you now hear the music go on to Step 4, if not, repeat the process until you select a MIDI driver that plays music.

4 Move your mouse to the file menu again and choose the New option. This will give you the chance to begin with a clean page to start working on. Let's lay down the first track and get our piece of music under way. Grand Piano in Track 1 is already selected so let's stick with that.

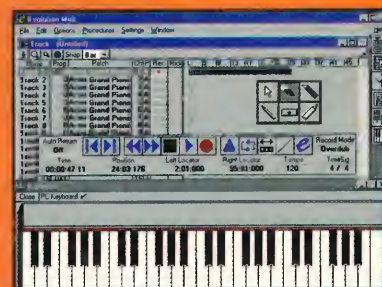


5 Click on the Virtual Keyboard icon on the right-hand side of the screen. This will bring up the on-screen keyboard which you can play using the mouse or your QWERTY keyboard. To play with the QWERTY keyboard as though you were tickling the proverbial elephant teeth, just tick where it says PC Keyboard on the top of the Screen Keyboard. Have a play around and when you've come up with your pumping new piano solo move on to Step 6. And hey, it's polyphonic, so you can play more than one note at a time!

6 Right, let's do some recording. When you're ready, click on the Record button on the transport bar at the bottom of the screen and the metronome will count you in 4... 3... 2... 1... Play your tune and press the Stop button when you've finished. Your tune will

now be represented as a black pattern bar in line with Track 1. Click the Rewind button and press Play to listen to your first track. Good, init?

7 If you made a mistake and want to record your tune again then just click the right mouse button which will bring up the Toolbox. Move the cursor to select the Eraser (Top, Middle) and now click on the black pattern bar to delete it. Bring the Toolbox back up and select the Cursor. Record your tune again until you are happy with it.



8 You may find that you have some notes that aren't quite on the beat. Don't worry because Evolution MIDI takes care of this for you with a feature called 'Quantize'. By pressing the Q key on your QWERTY keyboard, it will move all the wrongly timed notes to the nearest beat. No need to play things over again.

9 Now we'll add some drums to your piano tune. Click on Track 10 which is already set up as a drum kit and click the Record button on for Track 10 so the red light appears. You are now ready to record a drum track, so have a practise banging at the bongos until you think you've got the beat. When your ready just hit Record on the transport bar. Click the Stop button when you have finished banging in your beats then Rewind to the start of your tune.

10 Press play and have a listen to your musical masterpiece. Now choose the Save option from the File menu, give your tune a name and save it away. You can now go back to this tune at any time to change it, add to it or generally remix it by returning to the previous steps.

29 SENATORS MURDERED.
A SABOTEUR LOOSE IN THE CITY.
MARTIAL LAW DECLARED.
FLOODS, FIRES AND RIOTS.
(JUST ANOTHER DAY IN ROME, 205 A.D.)



CyberSites, Inc.
www.cybersites.com



PC CD-ROM

WIN 95
WIN 3.1



Totally immersive and faster than the hit web game, SPQR takes you inside an historically accurate reconstruction of Imperial Rome. Only catch is, there's a plot afoot to destroy it. As a gifted inventor's apprentice, you must discover the true identity of the saboteur. You'll call upon your knowledge and skill to navigate a labyrinth of politics, murder and deceit. Succeed, and the Empire is saved. Fail, and it's turn out the lights. Don't feel pressured or anything, though.



S · P · Q · R

THE
EMPIRE'S
DARKEST
HOUR

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SPOT THE CONNECTION

There's a certain logic to the existence of *Descent To Undermountain*. Parallax Software, the creators of the 3D system and the original *Descent* was formed from ex-Looking Glass Technologies people, remember. And, several years ago, Looking Glass were responsible for Origin's excellent *Ultima Underworld* games – an obvious influence for this game. These utilised 3D system even more complex than *Doom*'s to give role-playing a more action-orientated format, and greater visual richness, while brilliant level design made the most of the some pretty complex role-playing elements lurking in the background. Even four years later, *Ultima Underworld* still remains a must-have for RPG enthusiasts.

Descent re-interpreted as role-playing game? Advanced Dungeons & Dragons with 3D polygon monsters? Oh yes. Here be dragons and much, much more.



ADVANCED

Work in progress: Descent to Undermountain

It sounds like one of those games that is born from a heavy drinking session and an idle challenge: *Descent* with legged beasts in place of lasers. But of all the post *Doom* games, *Descent* proved to be one of the most enjoyable, thanks in part to a stellar performance from its 3D engine. Exactly the sort of 3D engine which could conceivably handle the complex shapes of walking, fighting, slathering creatures, in fact.

Based on the TSR's hugely popular *Forgotten Realms* campaign scenario, the game takes place in the *Undermountain* of the title, a 25-level maze of dungeons and passages set below the city of Waterdeep. Each level is equal in size to a level of the original *Descent*.

Lloth, the Drow Elf Queen is the ultimate foe. Naturally, however, being based on

Dungeons and Dragons means the game will throw up all manner of mystical and mythical beast for you to slay in swordy fashion. Or by sorcery, if you prefer. All the monsters will appear in solid 3D.

William Church, producer on the 16 man project, has been playing role-playing games for around 12 years, knowledge which has been backed up further by input from AD&D's creators. "The *Advanced Dungeons & Dragons* core rules are very much defined and in place, and are simple and easy to use in this sort of game," explains William. "But we want to give the feel of the rules as well as the rules. For example, when you have a high dexterity, your movement increases,

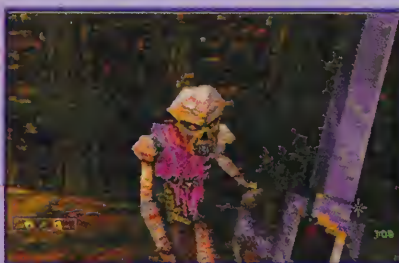
and jumping increases." William admits to looking at the likes of *Hexen* and *Ultima Underworld* before embarking on the project.

Descent To Undermountain, however, represents a major step on from those games, not least because of those wonderful monsters. "They are composed of roughly 200 polygons each," reveals William. "By using the *Descent* 3D engine the core system was already laid out, although we did have to add much more animation for these creatures."

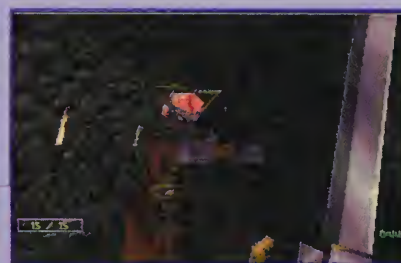
Rather than simply re-use the *Descent* system as it stood, Interplay chose to refine it further, allowing for images more in line with the game's theme. William: "We've



First disable the winged beast, then get it on the floor and hack it to bits.



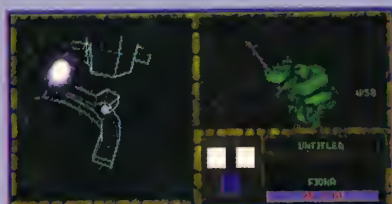
In every AD&D campaign there must be a lich to hound you. And this one is no different.



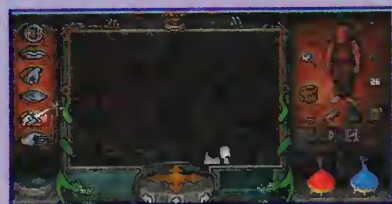
The flayer, like the lich, represents pure evil. Good, chaotic or neutral, it will attack you.



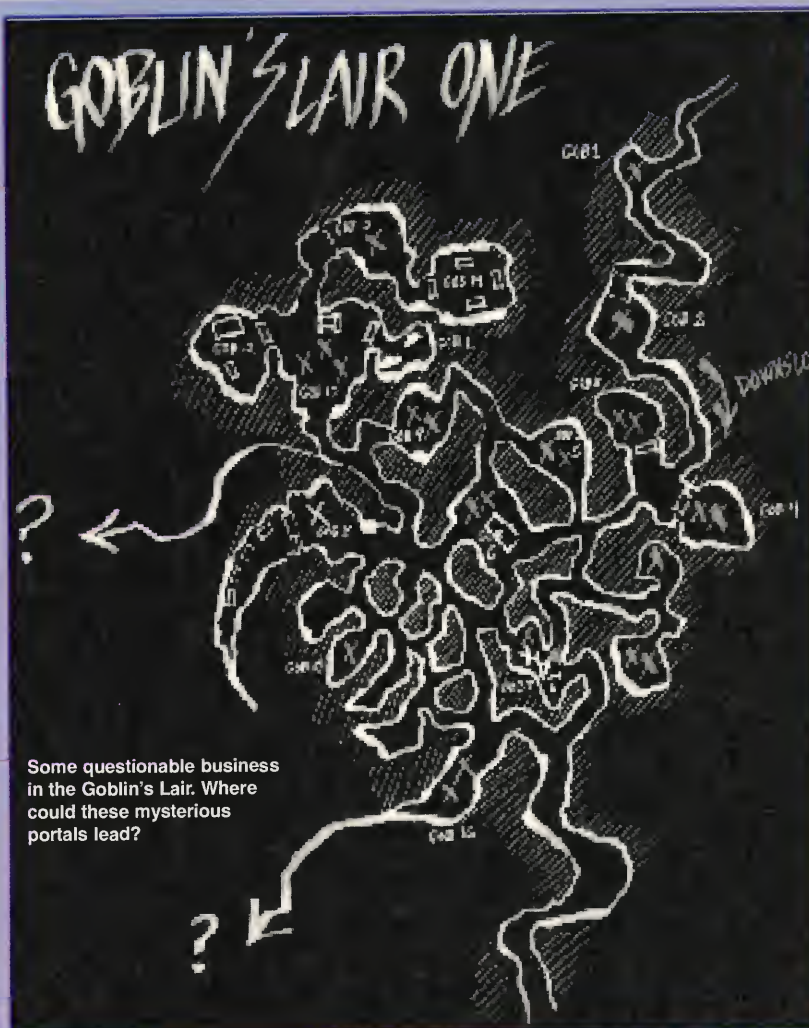
Despite the addition of a 3D engine, AD&D will maintain its essential maps.



This window enables you to guide your character via the automap.



Say goodbye to Underworld's role-playing game interface.



Some questionable business in the Goblin's Lair. Where could these mysterious portals lead?

added many new lighting techniques; mostly coloured lighting, and translucency. That is we can make an object semi-transparent and colour the light passing through it. We like to call it the stained glass look." The game has also recently been amended and optimised to incorporate an SVGA mode, something that wasn't part of the original design.

Adapting the game engine for an RPG's needs hasn't exactly been easy for Interplay. "Where do I start? We took an engine that was designed to have a space craft flying through a corridor, and made a dungeon with gravity, highly detailed monsters, 300 objects and an inventory system built in. What can I say? It's a miracle." The result is a seamless network of levels populated by orcs, ogres, elves, wizards, dwarves and even dragons – all eager to kill, kill, kill. And

this is a 3D engine capable of rotating 360 degrees about any axis, remember. This may not sound too essential in a game which has the player exploring the game world on foot, but *Descent To Undermountain* also caters for flying and swimming, as well as some flying sequences. Although it bears that AD&D tag, William prefers to think of the game as an 'action RPG'. "It's the first RPG of this type that makes the combat really fun, but also realistic," reckons William. "The game will be fun above all else. I would say it's the fastest paced RPG ever."

Descent To Undermountain always retains the single character, first person view. This means that the game doesn't bother the gamer with recruiting extra characters and handling NPCs. There will be the option to have up to four humans in the dungeons via

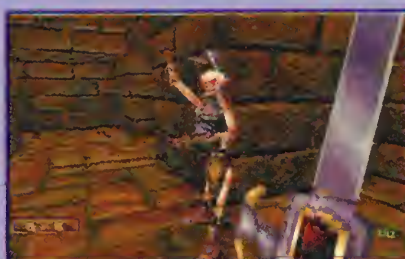
a modem or network, though. Plans are also afoot to use the game system for more AD&D titles. "We have quite a few titles in development," says William. "My personal next game will be an RPG that once again takes place in the Forgotten Realms."

Certainly, with *Hexen 2*, *Into The Shadows*, *Deathtrap Dungeon* and *Quake*, Interplay's latest foray into the world of RPGs will have stiff competition. But what with the official Dungeons & Dragons rules in place and the impressive results produced by that enhanced *Descent* engine, *Descent To Undermountain*'s future looks very bright indeed. Watch for our review. (MR)

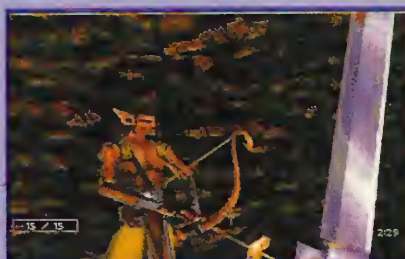
Descent To Undermountain will be released via Interplay in January, price to be confirmed.

Next Month

We'll bring you the playable demo of this great AD&D game.



Descent to Undermountain contains its fair share of undead thugs.



The elf doesn't take kindly to enquiries about his ears, and prepares to pierce yours.



An invisible fiend pops out from behind the pillar and gives a the kiss. Of death.



LOAD UP!

Hold onto your hat, your twin uzis and grenades. The Easter Bunny is coming your way, and his weapons, well, they're Reloaded...

Work in progress: Reloaded

MAMMA

Our favourite mother-less son is back in new garb, a pastel blue bunny suit and sickeningly cute panda slippers. No one really knows any more than before about this enigmatic walking baby faced leviathan, except that he seems a little happier this time around. It is believed that he has now come to terms with being an infant orphan and is no longer hung up about it. This of course spells danger for the entire population of the galaxy. A friendly hug or back slap from this pea brained giant can dramatically rearrange a skeleton, and leave it not as nature intended, unless of course nature intended one's skeleton to closely resemble flour. Mamma still only knows one word – his name and object of desire. This has been heard all over the place since his last appearance, as he has been scouring planet after planet looking for someone with guts enough to change his nappies.



BOUNCA

The galaxy's thickest doorman is back, and this time he is wearing a suit and hairstyle which just dare you to laugh, though the short golden hand crafted message which adorns his lapels should give you a clue as to how many favours this will earn you. Pleased with his new garb Bounca has honed his anti-social attitude – it now encompasses every living thing. Whether it crawls, swims, walks or flies. A shiny new weapon now sits in his grip, the aptly named Tri-me triple barrelled shotgun which has a great scatter, making its bite far worse than its bark. Bounca has been much in demand for public appearances and the like since the last outing, though the invitations dried up when he stabbed one of the president's wives with the scissors he was supposed to be cutting a ribbon with. One of the most eventful night club openings ever. You better dance.



MAGPIE

Sister Magpie is a roving Cyber Nun from an ancient, threatened nunnery. Her original programming urged her to go out into the galaxy and search for funding. She was given a target figure and was to return once she had collected it. Unfortunately she malfunctioned a few millennia ago, when a couple of undesirables put a bullet through her armoured wimple, deep into the central cortex of her Simulo Sapient (brain) before they made off with enough money to retile a major portion of the quadrangle. Reasonably enough, but against her original directives, Sister Magpie had herself one mother superior of a gun fitted. She finds it a useful tool in collecting funds from anyone who crosses her path. The unwilling usually end up greased and penniless but forgiven. The second fault with her programming is that she no longer has a recall code, she will simply never ever return, and is destined to rattle her collection box in every corner of the galaxy until she is someday stopped.



There's a game called *Loaded*, and here at PC REVIEW we think it's great. Except we shouldn't really be playing it – *Loaded* is a Playstation game. It did, back in 1995, exist as etherware for the PC, but disappeared into the realms of missed dead-



Featuring a 3D-style forced perspective, *Reloaded* has a most original look.

lines, struggling graphics engines and market gaps. So, when Gremlin announced that the sequel *Reloaded* was scheduled for a PC release and that this time the Sheffield supremos meant it, we rang the victory bell and rolled out the red carpet for the sequel to the PC game that never was.

Reloaded, won't be a typical PC game. There's barely any strategy involved and little interaction with any other characters. What there is a lot of however, is shooting... and blowing things up. Comparisons with the arcade classic *Gauntlet* and the Bitmap Brothers' winning game the *Chaos Engine* spring to mind, but neither game packed the visual style or sense of humour that *Reloaded* brings to every Mexican stand-off.

The look of *Reloaded* owes an awful lot to 2000AD artist Jason Brasshill, and a lesser amount to Greg Staples, another 2000AD artist who did the designs for the original game. Fans of the comic will be familiar with their style. Greg Staples is best known for the strip *Venus Blue Genes*, while Brasshill is currently working on *Judge Dredd*.

PC REVIEW spoke to Brasshill in his Brighton studio and asked whether he found it odd working on a computer game. He didn't. "Before I started working on comics, I was doing graphics for computer games, back in the 8-bit days. I was at art college and finding it so boring. I started out working with my mates who could program. They let me do graphics for their demos." Brasshill

then worked for Ocean on *Adidas Champion Football* (around 1990) and even had a spell at Codemasters, doing the visuals for Commodore 64 games like *Bugs Bunny* and *Steg the Slug*. But that was all in the old days. How did Brasshill feel about his cartoons coming to life

properly? "It was quite incredible – the guy at Gremlin converted my paintings into 3D Studio models then added motion capture. To see, for example, Bounca dancing was just amazing."

As for creative freedom, Brasshill found himself in plenty of room. "They told me to do whatever I wanted. And if it was a bit over the top, then I'd have to change it. Although I had a free range - Gremlin still knew what they wanted."

Loaded for its visceral glory wasn't without its critics. Some felt that there was too much wandering around, just wiping out everything in your path. That there wasn't enough depth, hidden areas or puzzles to solve. Having spent a year on *Reloaded*, Gremlin has cut down on the enemies to create a more structured game and some new cerebral challenges. You'll even get to exchange pleasantries with some non-player characters to gain information. Dialogue like "I see you've already found where we've stashed the explosives and the heavy weapons. Kill me I dare you," isn't exactly Oscar award-winning stuff – but it's a leap in the right direction.

All the characters in *Reloaded* have their own weapons and special smart bomb type-things. Mamma, for example, throws a bit of a tantrum, which sends a seismic

ripple through his immediate postal district causing everyone who isn't his mate to explode. The Consumer releases a poison gas cloud designed to be absorbed into her victim's skin. This renders them immobile and mintier-tasting. Extra new weapons include Bounca's triple barrelled shooter which fires a three-way spread.

The graphics have also been souped up with a more isometric view. Although *Loaded* featured 3D-style graphics it was essentially flat. Now there are morphing terrain effects and multi-height levels, with things like lifts to take you up to rooftops. The finished game will feature six worlds to explore, packed with gimmicks. Level specialities include a bunker where surgeons poison you and players need to find medicine promptly before they perish. A monastery level features crystals, which fall from the ceilings whenever players make a noise. A desert-level has hidden mines to explore, while another is set in a diamond factory complete with prisms and mirrored surfaces, which enable you to bounce death rays round corners!

Reloaded is to support a two player network game at the very least, which is supposed to be played co-operatively. However, the player can alter the options at the beginning of the game so that their shots hurt each other or just knock back friendly characters. This is the Friendly Fire option!

We hope to bring you the definitive *Reloaded* experience in two months time, with a review, a playable demo and news of

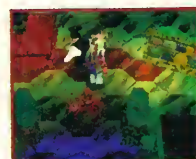
just how much network and death match support Gremlin manage to crowbar into the final version. Until then sit on your hands, read our interview with the game's producer Ade Carless on page 7 and have a chuckle at the character profiles. (JB)

For further info call Gremlin on ☎ 0114 279 9020.



Bounca's Tri-me makes a mess. Neat explosions, eh?

ORIGINAL?
Loaded was a massive hit on the Playstation. It took America by storm. Of the 250,000 copies sold worldwide, 160,000 turned up inside American PlayStations. Pop Will Eat Itself who did the soundtrack even saw a boom in their record sales off the back of it. No official copies were sold in Germany, however, as the game was banned there due to its violence.



A visit to the crystal factory. Make the most of the mirrors.

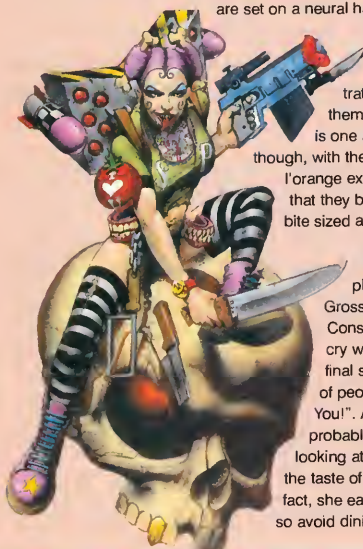


Reloaded is packed with plenty of butcher shop action.



THE CONSUMER

Her teeth have been enhanced so they can shear through flesh and bone with a single bite, and are removable and interchangeable so those troublesome stringy bits of ligament are easier to get out. Rocket pods have also been fitted to her shoulders and are set on a neural hair trigger.



Consequently, The Consumer has to concentrate hard to make them NOT go off. There is one advantage to them though, with their unique Agent I'orange explosive, the meat that they blow up is cooked, bite sized and has a delicate orangey flavour subtle enough to please even Lloyd Grossman. The Consumer has a battle cry which has been the final sound bite in a lot of peoples minds: "Cook You!". As you can probably tell just by looking at her that she likes the taste of man's flesh. In fact, she eats it at every meal, so avoid dining with her.

CAP 'N' HANDS

Cap is still about as approachable as a starving grizzly, the glowing embers of his universal hatred have been further fanned by the fact that his body has been ruined. This occurred when he



broke out of a prison transport craft, believing it was just a few meters off the floor. In fact it was just going out of orbit and heading for deep space. Cap plummeted to the ground in a dazzling display of pyrotechnics, passed straight through the fragile crust of the planet AFRAY-BEN-2 and discovered what scientists had been speculating about for ages. Its core was still molten. And old Cap never did like a hot bath.

There isn't much to see there now, the entire planet was laid waste by what the only two surviving witnesses called 'a boiling mass of swearing lava and the most angry natural phenomenon I have ever seen.'

Now bereft of his chesthair, and the pecs that it once carpeted, Cap roams the galaxy venting his anger using his Popeye-like forearms.

BUTCH

Has perhaps been a little overexposed to a certain Terran TV program – he seems at first glance fully Pammy-ed up. Butch now wears beach attire due to his last daring, legendary escape from incarceration. He managed to swim almost 3000 miles from his island prison, ending up in a popular tourist resort, he buried a lifeguard up to her neck in sand (head first) and made off with her costume. I think you will agree that Butch too has a curvy body,



though some of them are in places which make your food rise. Butch believes that when his tan evens out he will blend in like dog chutney on a brown carpet, we wouldn't take his word for it, even if you do notice him pretend you haven't. Butch has killed people with Uzis in ways that don't involve firing or clubbing. Two tips on dealing with the sensitive Butch. One: don't mention his tan lines. Two: don't even think about his stretch marks. Okay?

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Are you frightened yet?

PLAYER



With Christmas out of the way, now's the time you should be scouring the stores for bargains. We review all the latest budgets games on page 78, but we advise you to shop around for any brand new game – you'd be amazed how cheaply you can pick stuff up.

This month we bring you the best of flying and the worst of driving. We take *JetFighter III* and the new Microsoft *Flight Sim* for a spin and come down to Earth with a bump, with the disappointing *Destruction Derby 2* and *Daytona USA*. Play away!

Mark Ramshaw
Games Editor

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REALMS OF THE HAUNTING

Could it be a coming of age for the interactive movie, the graphic adventure and the shoot-'em up?

Realms of the Haunting was first previewed to selected journalists in May 1994. Gremlin showed a prototype of a light sourced, incredibly detailed graphics engine. A complex, dark and adult storyline with the finest video sequences ever seen was promised to go with it.

But, things have moved on. Brilliant 3D engines are a given. Film production studios are clogged with games firms. And every developer worth half its share issue has bitten the apple of adult entertainment. So, in January 1997 we find ourselves testing *Realms of the Haunting* on the two factors that would have kept you coming back anyway: depth of storyline and playability.

The research team at Gremlin certainly went to absurd lengths to create a massive,

believable game world. The story spans a millennia, and it has real, mythical and entirely fictional elements. There's a sniff of the Knights Templar, a glimpse of the Seven Seals of the Apocalypse and even cameo appearances by legendary disciples of the Devil, such as Belial.

You begin the game sitting in the back of a taxi. Through a flashback you're told everything that your character, Adam Randall, knows about the mystery surrounding his father's death. From then on you need to piece things together from

scraps of documents, chats with characters, ghosts and spirits you bump into, and the power of 'reflection' – a voice in Adam's head. Starting out at an old English manor house in the quiet village of Helston (yes, it really exists) *Realms* takes you quite literally on a journey to Hell and back.

You control your character through a pretty standard first-person interface. Directional movement is handled via the keys, with the usual move, strafe and run options. More innovative however, is the way you can control trickier tasks



All the action starts here – a spooky old manor house. Which later in the game is overrun by robots.

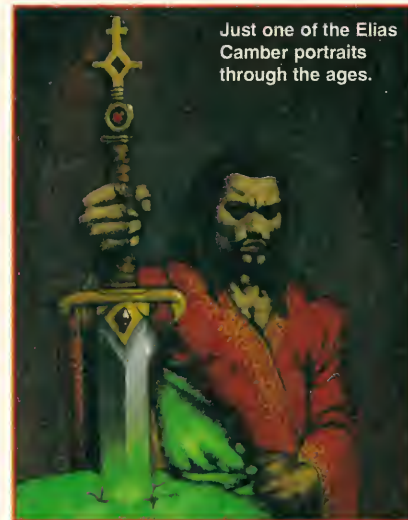


ARMS AMNESTY

Tools of the trade
Here's just a selection
of the weapons
available to you in
Roth, including the
Colt 45, shotgun,
Creator's Staff, Broad
Sword and Aelf's
dagger.



Don't be hanging
around on your
knees for too long.



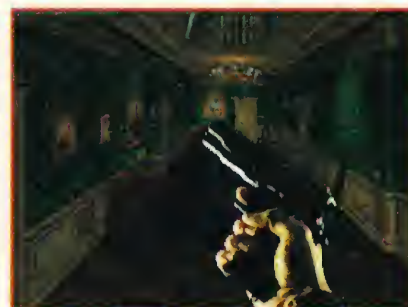
Just one of the Elias
Camber portraits
through the ages.



This Isn't Kansas. Just one of the Realms...
that be haunted!



The buildings in *Realms of the Haunting* have
a chunky, authentic feeling to them.



Chuckling in a new clip in the nail-biting
reloading sequence.

► using the mouse pointer. You point and click to aim your weapon and to pick up and use objects. Since you have to explicitly select and grab things, you're treated to a crucial degree of interactivity. You don't just run over ammunition to collect it, you click on it to add to your inventory, with boxes of shells or bullets popping into your inventory with a papery rustle. Inevitably you end up thrashing around objects, waiting for the cursor to change colour, trying to figure out what you can pick up and what's just a decorative bitmap sitting there.

Cinematic breaks

At key points in the game the action changes from first person to movie-style sequences. These are generally of a high standard and Gremlin's in-house video compression (Gremlin Digital Video) does a fine job of showing the movies. The transition from movie to game and vice versa is well-handled and goes a long way to enhancing atmosphere. Smartly, the backdrops on the movies are taken from the same raw material as the in-game action. In one incident you bump into a character who makes the skeletons on the floor come to life. You're then treated to a gorgeous 3D Studio sequence of the bones shaking themselves down. While switching back to the action and being chased by the sprites is fun it's still a tad disappointing.

Did we say sprites? Ah, yes, we forgot to tell you. The graphics engine which wowed the hacks in 1994 is still perfectly respectable

with high quality rendering on the walls, floor and ceiling. The only let down is the way the enemy characters look. Gamers everywhere have come to expect the complex, flexible polygonal models from the likes of *Quake* – or even Gremlin's own *Euro 96*. So, while the characters here are neatly rendered and indeed rounded they do tend to pixellate up close. Even with the lush backdrops it looks a little retro.

Of course, Gremlin maintains that it's unfair to compare *Roth* to the likes of *Quake* – because *Roth* is more of an adventure than an action game. The suspension of disbelief doesn't have to be visual, because the storyline takes you in. Alas, though, the argument doesn't hold, because there's plenty of shooting action in *Roth*. And although, like the sprites, it's old fashioned, it's fun too.

Roth doesn't swarm you with bad guys, but releases them gradually – the first time an Urge pops up it's quite a surprise!

Your character Adam Randall is nippy with his fists, but the first proper weapon you come across in the game is a handgun. Reloading the gun is a neat touch. Use up all nine bullets in a clip, and your hands have to go through the motions of removing the cartridge, reloading, and recocking the weapon.

Meanwhile, you'll be biting your finger nails and dodging approaching beasties. There are plenty of other weapons, but sadly none of them has such attention to detail.



What damages *Roth*'s credibility as an out and out adventure is that unless you're willing to do a lot of shooting and dodging and do it well, then you're not going to stand a chance of getting through. And if you limp through the game, coming away from every fight badly wounded and out of ammo, you're certain to reach a stage where your low health level and inability to find any more power-ups, means that you end up either saving the game after every shot or else giving up and returning to the beginning... in a rage!

Summon the expletive

Speaking of rage, there's another area of *Roth* that's going to summon forth the expletives. Remember the hub-based nature of *Hexen*? The way that the entire game revolved around a central core, from which you'd unlock doors and find other dimensions? And do you remember the way that towards the end of the game you'd have absolutely no idea where you had to go next and went revisiting every room to find which door you'd now found a key for, or which secret area that you didn't even know existed had just opened up? *Roth* isn't as bad as that. But there are times when it feels perilously close! You'll scream as some arbitrary element of the game opens up without so much as a bye your leave. Surely, it's obvious after Adam meets Rebecca for the first time that the armoury of the house can now be explored. Isn't it? ISN'T IT!



REALMS OF THE
HAUNTING





Above we see a couple of the high quality film sequences from *Roth*.



Sadly you don't get a chance to buy armour like this off the peg.

There are times when you wonder what *Roth* actually offers that, say, *Quake* doesn't. Well, to begin with, although there's plenty of fighting, you're not just looking for keys, weapons and exits. As in any adventure game, there are a variety of objects you have to pick up that will remove obstacles you face later on. You may have to open up closed areas with an orb or some special Words of Power. At other times you advance your cause by discerning something about the storyline, or shooing beasts out of your way with pistols or any of a range of magical gadgets. Still, maybe that's as much a part of life – acquiring stuff to clear obstacles – as it is any PC game.

So what makes it really special?

The thing that does make *Roth* so special is the depth of storyline. There's a real sense that you're on a mission rather than just looking to move to the next level. *Realms* elevates storyline from fluff and filler, scrawled on the back of an envelope using a few scary sounding names (like in *Quake*) to where it should be in PC games: the element that makes a title unique.

Here's a game then, that's everything it promised it would be. Good to look at, complex, and grown up. But one that definitely needs more thought on the shooty bits, less cursor thrashing for hot spots and a clearer indication of areas that were available to be explored. Considering all of this, the immersive storyline and atmospheric game dynamics needed to be damned good for *Roth* to be our game of the month. And they are. So, that's all right then! (JB)

REALMS OF THE DAUNTING

Our story begins long ago, with a French Templar named Claude Florentine. His persistent evil thoughts eventually summoned a Demon called Belial, who convinced him to sell his soul. Florentine and Belial, being a nasty couple, decided to bring the Devil to Earth, and thus start the Apocalypse. To achieve their ends, they required an ancient relic, the Soulstone. The entrance to the Soulstone was located in England, so off they went.

They quickly located it, but found it was locked by seven menhurs coded with magic Seals. Worse, while breaking the Seals would unlock the Shrive – the key to the Abyss – and thus free Satan, the menhurs were protected by Falshire Knights. The pair dispatched the knights, but then found the Seals would take more than a century each to crack.

After several hundred years, and with only one Seal left to break, Belial and Florentine fell out over who'd get to free the Devil. So they split up, each independently seeking to crack the seal and



Find this planetary diagram confusing? Then just try the storyline...

retrieve the Shrive alone. But both were too evil to touch the Shrive, so they knew a third party would be needed to recover it.

You become involved in the affair after the death of your father, Charles Randall. The parson of Helston, a quiet Cornish village, Charles came across an old house, built by Belial to hide the Seals.

Sadly, Charles was enslaved by Belial, who then visits you and curses you with terrible dreams. Eventually you're drawn to the same place, and it's there that *Realms of the Haunting* begins. Arriving at the house, your mission is to destroy the last seal and thus prevent the Apocalypse as Belial and Florentine try to free Satan.



The study. Behind one of those book-cases lurks a secret passage.



DEVELOPER

Gremlin

PUBLISHER

Gremlin

CONTACT

0114 279 9020

PRICE

£44.99

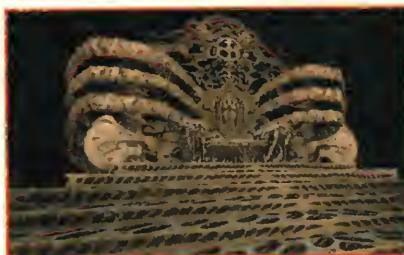
MINIMUM SYSTEM

486/66 DX2, 8Mb, 2xCD-ROM drive, mouse

PC REVIEW VERDICT

A triumph of content over style.

8



Want to sit in this throne? Well, we advise you wear some asbestos gloves when you do.



The skeletons are, predictably, tough to kill. Blow them to bits with the shotgun.



THOSE CRAZY SCAVENGERS

There's more where *Amok* came from. Watch out for this little lot, coming to a PC near you in 1997.

SCORCHER – Essentially *Wipeout* without the vehicles, *Scorcher's* 3D race-tracks are near works of art, all back alleys and impossible pipes. A 65,000 colour mode brings out the best in the scenery. Early plays suggest it's another very single-minded playing experience, though.

MUDKICKER – An off-road racer, boasting souped-up Volkswagen Beetles... INTO THE

SHADOWS – The real one to watch, this has been touted as a *Quake*-beater, but is in reality a next-generation beat-'em-up, with adventure-style exploration elements and some exquisite 3D and lighting effects. You're likely to see it in the next 12 months.

TERMINUS – A UK release for this ambitious adventure game has yet to be announced, and given the sexual content it's not that hard to see why. Some pretty clever 3D routines are being used to smooth off polygon shapes, which means more rounded breasts on the large-chested female characters.

PUBLISHER

GTI

CONTACT

0171 258 3791

PRICE

£39.99

FORMAT

PC CD-ROM

MINIMUM SYSTEM

486/66, 8Mb RAM, double speed CD drive, mouse, all major sound-cards, Windows 95

A ground and aquatic-based blaster that's a wee bit shallow, but joyously frantic all the same.

PC REVIEW VERDICT

7



Down where the action is, *Amok* dunks the thrill seeker underwater in search of gameplay bounty, then onto dry land for a bout of old-fashioned blasting action.

AMOK

Scavenger finally bursts onto the PC screen with a console-style blaster. So the company has a fitting name, then...



A messy mix of voxel landscapes, sprite enemies and 3D main craft. Oops.



Enemy base out: the transparency effects make for some excellent explosions.



Listen to those mad, crazy people. They'd have it that anything with shareware-style graphics must be a retro gem. This is of course utter nonsense – the reason the classics of yesteryear were so great was because they were designed that way. They looked poor because there was no alternative. Fans of gaming the good old fashioned way ought instead look for the new generation of games which offer the immediate, simple, blood-minded action of the golden era. Like *Amok*, for instance.

There are three distinct *Amok* emotions. The first is your basic disappointment. This is the first PC release from Scavenger, after all. The same Scavenger which did its best to come across like *Id*. So, who wouldn't be disappointed when it turns out that *Amok* is a simplistic shoot-'em-up, and one which dares to use those old-fashioned voxel landscapes and flat spritey bad guys?

Then the gameplay kicks in, which triggers the second set of *Amok*-feeling. Feelings like elation, concentration,

frustration, and straight, time-sapping addiction. There's little to do here, beyond wander to the next objective, blow it up (or whatever else is required), then wander on to the next important location, dodging the non-traversable bits of rockery and blasting any enemies as you go.

But all-time greats have been formed from simpler elements, and so *Amok* too manages to do much with a simple formula. The control system offers scope for a reasonable level of strategy. The various weapons work well. The mixture of graphic styles not only hangs together but ensures that the game whips along at breakneck pace, even in resolutions up to 800x600 at 65,000 colours.

The only fly in the ointment (or should that be turd in the water?) is that by



Going above the watermark makes for a nice change of scenery.

embracing simplicity, *Amok* also lacks the real gameplay scope of a *Quake* or even something like *SWIV 3D*. The limits of the voxel landscaping render all the locations samey and non-memorable, while the bad guys are all of the minor irritant rather

than the pants-soiling behemoth variety. The thing is, because *Amok* doesn't allow for up and down movement, it amounts to nothing more than a 3D view of a 2D game. Without the variety offered by that third dimension the design begins to feel too limited. Cue emotion number three: mild resentment. Because your PC can do more than this.

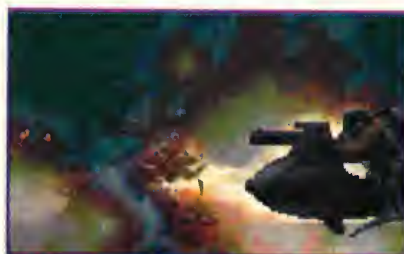
It's no disaster of Titanic proportions, then. *Amok* remains a clever programming exercise, and a good lesson in the virtues of unpretentious gameplay design. Just not a very long lesson. (MR)



The real star of the game is this propeller-powered super-mobile submersible.



The amphibious two-legged vehicle gives a mech-ish edge to things.



An inaccurate aiming system tends to make all fights much of a muchness.

FROM THE MAKERS OF...

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ROLEPLAYING COLLECTABLE CARD GAMES

find out just...

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- WHERE DOES IT COME FROM?
- WHAT GOES ON?
- WHY YOU SHOULD GIVE IT A GO
- WHERE CAN YOU GET ROLEPLAYING GAMES?
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- ESSENTIAL TIPS FOR MAGIC: THE GATHERING

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- SPECIAL SUBSCRIPTION OFFERS



Please mind the gap!
Step this way to
find out more...

**8
PAGE
SPECIAL!**



Every month in arcane...

Why?

Hello and welcome to the **arcane** taster special, a bite-sized morsel of **arcane**, the gaming magazine. Over the next half dozen pages we're going to introduce you to the world of roleplaying and collectable cards games, two aspects of the gaming hobby which are inextricably linked to some of the games you play on your PC.

If you're into playing games of any kind, whether they be computer games, board games, card games or otherwise, you're going to be thrilled by what you read in this taster. For you're the kind of person who enjoys the challenge of gaming, and the type of games which **arcane** covers every month are the games which present you with new and exciting challenges. I won't dwell on what roleplaying games are here (or collectable card games for that matter), because as you read through the rest of the taster, all will become clear.

What I will say is that I hope this small introduction to **arcane** encourages you to go down to your newsagent straight away and pluck a copy of the full magazine from the shelves. It'll open up your eyes to the expansive vista of gaming opportunities which lies in front of each and every one of us. Read on and enjoy.

Paul Pettengale editor, **arcane**

CHECK OUT THE BEST...

Each month in **arcane** we select one new release which we think is the best roleplaying or collectable card game reviewed that issue. The **arcane** Seal of Approval has established itself as a sought-after accolade in the roleplaying industry, and if you see it against any product we've reviewed, you can be assured that whatever that item may be, it's worth every penny of the asking price. Recent winners include the *Netrunner* CCG, the new *Traveller* RPG and the *Deadlands* RPG.



FEATURES

There's no end to the information and ideas which **arcane** provides to help you get the very most out of the games you play. From suggesting ways to make gaming more fun, to trying to encourage you to try something completely new, our features are unmissable.



REVIEWS

Our aim is to review every new roleplaying game, roleplaying supplement, new collectable card game, new card game expansion, new fantasy or science fiction board game and new computer roleplaying and related games in **arcane**, by the best reviewers in the business.



BOOK REVIEWS

If you're into fantasy and science fiction, you should be reading the reviews in the Great Library, where we read and discuss the month's new releases in these two happening genres. Plus, each month we give you the opportunity to win books for free.

What the hell is...

WHERE DOES ROLEPLAYING COME FROM?

If you're into PC games, it's more than likely that you've given roleplaying a try. There's a heap of roleplaying jaunts available, from the black and white blocky visuals of the original *Dungeon Master*, through to the graphically opulent likes of *Daggerfall* and *Crusader: No Remorse*. All of these games have a similar theme: you

control a character, or a party of characters, who interacts with the people and places that make up the game's world, in an effort to complete some adventurous task. These games are usually of epic proportions, taking weeks to complete, and all have one other thing in common: the inspiration for the genre comes not from other computer games, but from another form of game which has been

popular since the mid-70s, way before Richard Garriot started plugging away on the original *Ultima* game.

That inspiration is known as tabletop roleplaying. The original RPG is known to most – it was called *Dungeons and Dragons* and was first played by a bunch of wargame enthusiasts back in 1975. These people, who included a chap named Gary Gygax (who was a designer on the original *Dungeons and*

Dragons game), were getting bored with recreating historical battles using metal miniatures and complex rules systems. What if, they thought, we just take a few characters from our regiments – sort of heroes from the field – and pit them against fantastical beasts such as dragons, orcs and ogres, and we do this not on a battlefield, but under a castle in a complex of caverns? They preceded to do so, and roleplaying was born.

When?

The first roleplaying game was called *Dungeons and Dragons* and started back in 1975.



ON-LINE

Every serious gamer should be plugged into the Net, so you can check out the **arcane** On-Line pages at <http://www.futurenet.co.uk/entertainment/arcane.html>. Our World Wide Web site is packed with elements from the pages of **arcane**, together with discussion forums, reader contacts, classified ads and a whole lot more.

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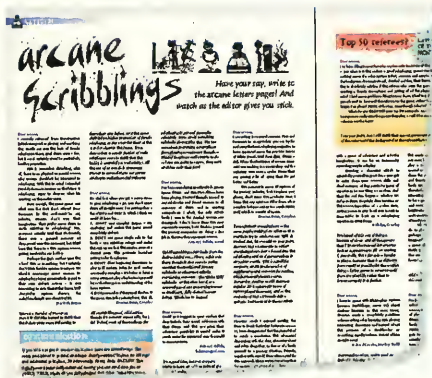
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Where?

the
gaming magazine
arcane
**TASTER
SPECIAL**

Opinion

arcane doesn't pull any punches when it comes to commenting on the state of the gaming industry, new ways to play roleplaying games, and other essential issues which are of interest to every reader.



Reader Interaction

RPGs are about a group experience, and this is an essential part of **arcane**. The readers are all part of a worldwide club, a network of people who express their opinions in the magazine, and it's a club that you can get involved in.

White Wolf Explosion



News

All gamers need up-to-the-minute info on which new games and supplements will be hitting the shelves. **arcane** delivers all you need to know, with helpful comment on availability.



Competitions

From new games to the latest video releases, with **arcane** you can win it all. Each month we pack in the best competitions going for all your roleplaying and card game needs.

... Roleplaying???

WHAT IS ROLEPLAYING ALL ABOUT?

Roleplaying is, as the term suggests, about playing a role. It's about adopting a persona that is not your own and pretending in your mind to be that person. When you play *Quake* this happens to a certain extent - you are that mercenary running around castles firing off missiles at all manner of bad guys. But tabletop roleplaying goes a lot deeper than that. All of the action takes place in the mind of the players, and so it's not limited to how advanced a set of

programming routines are. A bunch of people get together and create a story, with one person taking the lead and presenting the plot and situations for the players (who each adopt a single character) to deal with. The

popular roleplaying system), but it's by no means the be-all and end-all of RPGs.

Imagining what roleplaying is actually like is pretty bloody hard until you've given it a go, but suffice to say that once you've tried your hand at it

PC game. Acting out the role of a hero from another time or another world gives you the chance to let go and forget about the real world. Roleplaying is about escapism, and the only limit is that of your imagination.

What?

setting doesn't necessarily have to be a fantasy one - there are now dozens of roleplaying games with just as many settings. *Dungeons and Dragons* still exists (and is still the most

**It's about adopting a persona that is not your own
and pretending in your mind to be that person.**

you're going to want to do it again and again. Because roleplaying games are played with a number of people, there's a level of interaction which far exceeds that which can ever be achieved with a



Please mind the gap!
Step this way to
find out more...



What the hell is... going on???

roleplaying games are played around a table, with a referee who describes a plot and situations, and players who adopt roles within the adventure. Here's an excerpt from a typical roleplaying session...

Referee: Okay, your ship has crash-landed about 15 miles away from the city you saw as you descended, and it's in a bad way. Jim – you've been injured in the leg (rolls dice) and it's pretty bad, so you won't be walking anywhere.

Andy: I'll dig out the medical supplies from the ship's hold, or at least what's left of it...

Jim: And I'll sit very still, waiting for Andy to get the gear so he can patch my leg up.

Sarah: I'll get out of the ship and have a look around to make sure there's no-one hostile in the area.

Referee: The stores are in a right state, with boxes everywhere, most of which have split open with their contents spilling out. (Rolls dice). Andy – you're in luck, the medical supply box is still in one piece and you find it without trouble.

Sarah – it's getting dark outside, and although you can't see anything, you can hear low growls from behind

an outcrop of rocks just a couple of hundred yards away.

Jim: You're in pain; your leg hurts real bad (rolls dice), though you manage to stay conscious.

Andy: I return to the bridge and start to strap up Jim's leg.

Referee: Okay, fine – you need to roll against your Medical skill. If you succeed, you stop the bleeding and Jim can rest easy for a while.

Andy: (Rolls dice.) Yep. I succeed.

Sarah: I'll draw my blaster and slowly approach the rocks.



FREE! A COMPLETE SCENARIO AND MAPS



To play a roleplaying game you need an 'adventure', a plot linked with a story, a series of locations and characters for the players to interact with. These adventures are called scenarios, and we present **arcane** readers with one every month. Our Encounter combines a special location with all the characters that can be found there, plus plot ideas and one fleshed-out adventure. These Encounters come with maps, which help the players to visualise the location, and often floor-plans of specific areas which can help in the positioning of characters when the fighting starts. The **arcane** Encounters come slap-bang in the middle of each issue, so they're easy to pull out and use. What's more, they're designed so that they can be used with any roleplaying system, in many cases regardless of genre. That means that there's something for everyone, every month.

What the hell is... Roleplaying???

WHY DO YOU NEED RULES?

Of course, to play a roleplaying game you do need a set of rules. Rules are there to govern the outcome of situations, so that the referee (the person who takes the lead in a roleplaying game, and who thinks up the adventure the players are going to get involved in) cannot make arbitrary decisions, and to provide inspiration and useful ideas. When you buy a roleplaying game, all you're really buying is the rulebook (typically a couple of hundred pages in A4 format) and some dice (which are used to determine the success of actions

performed by the characters that the players in the game portray).

These rules can be daunting at first, but they are necessary. What happens, for instance, if a Han Solo-type interstellar smuggler is being chased along the roof-tops and he comes to the end of a building, with a 10 feet leap to the next? Can he make it? Or will he fall to his death? The player who's taking on the part of the smuggler decides to go for it, and rules are consulted to see if he's successful – given the distance the success may not be automatic, so dice are rolled to determine the result. As well as these day-to-day rules, a roleplaying game's rulebook also contains lots of information on the world the game is set

in – the *Star Wars* roleplaying game, for instance, has pages of information on the characters from the films, the Empire, the Rebels, the way they all interact and how players can assume the characters of people in the *Star Wars* universe. The referee uses all this information to come up with an adventure – the next film in the *Star Wars* series as he sees it, say – and then the players' characters are dropped into this adventure and given the chance to decide what happens.

WHY ARCANÉ?

Each month in **arcane** we review all of the latest roleplaying games, and the additional rules and background supplements which are released for those that are already being played. We also present you with features on how to roleplay, and how to get the most out of



your games. We come up with sample adventures, and we look at the different genres out there, coming up with ideas that referees and players can use. If you're tempted to give roleplaying a go, then pick up a copy of **arcane**, check out what we think is hot, and then get a bunch of like-minded individuals together and have some fun!

Referee: As you approach the growling gets louder and louder, and then, before you have a chance to react, a wolf-like creature with red fur and extremely long fangs leaps from behind the rocks in your direction. Roll against your Dodge ability to see if you can manage to get out of the way.

Sarah: Gulp! (Rolls dice.) Phew – I manage to dodge, and I'll have a blast at the beast as I leap out of the way...

Referee: Okay – roll against your blaster score to see if you hit.

Sarah: (Rolls dice.) I hit!

Referee: The beast tumbles to the ground, yelping. It's down but it's not

dead. Now, back to the ship – Andy, what are you gonna do now?

Andy: Hearing the shot outside, I'll leave Jim and rush out to join Sarah, drawing my blaster as I go.

Referee: It's getting darker still now, but you can just about see Sarah on the floor a couple of feet away from a large ball of red fur.

Andy: I'll run over and see if Sarah's all right, shouting: "You okay?" as I go.

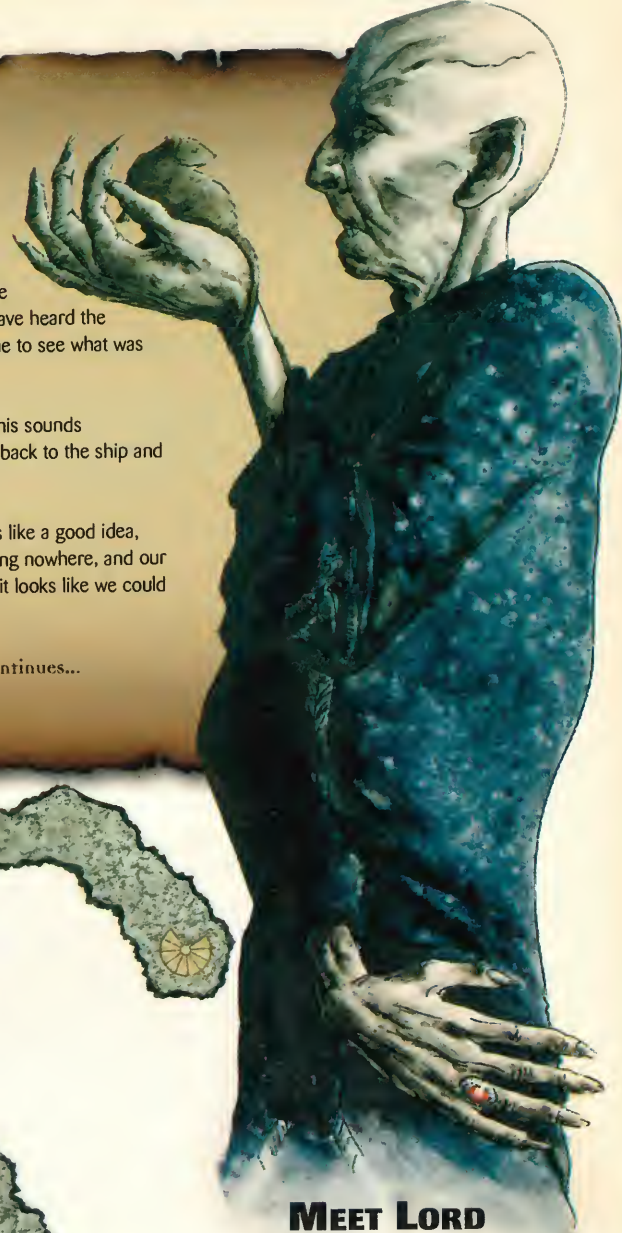
Sarah: I'll shout back: "No need to worry, I'm fine, but this dog creature most definitely isn't – I got it bang in the chest." Then I'll get up and start walking back towards the ship.

Referee: There are howls and more growls coming from the distance, and it sounds like there are a lot of them this time round – they must have heard the blaster shot and come to see what was going on.

Sarah: Oh Christ, this sounds dangerous. Let's get back to the ship and lock ourselves in.

Andy: Yeah, sounds like a good idea, but with the ship going nowhere, and our supplies scrambled, it looks like we could be in trouble.

And so the story continues...



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FOR EXAMPLE

Recent Encounters have included Starkmoor Hall, a ruined stately home where vampires lurk; a pirate galleon, crewed by suitably nasty reprobates; a travelling circus, where all is not as it seems; and the archeological dig, where an alien presence has been found.



WHERE DO YOU GET ROLEPLAYING GAMES FROM?

So, you're intrigued with what you've read so far and now you want to give roleplaying a go.

Most roleplaying games are sold in small, independent shops and so they can be particularly difficult to get hold of if you live in anything but a large town or a city. However, even if there isn't a small roleplaying games store near you, you can still get hold of all your gaming requirements by ordering from a reputable mail order supplier, of which there are many. Also, all Virgin MegaStores carry roleplaying games and collectable card games, so if you're on your way to a major city, you know where to head. Every month a number of fast and reliable mail order companies

advertise in the pages of *arcane*, so you know exactly where to turn when you want to start spending some of the old folding stuff.

AD&D

Undoubtedly the most popular of games, this is for many people the most obvious choice to begin with, however it's now a bit old-fashioned, and you will certainly find easier systems than this one to start off with.

Background: Scores well here as practically everybody is familiar with the sort of fantasy setting that *AD&D* presents. It certainly enjoys one of the richest roleplaying environments.

Complexity: This is where it all goes wrong. *AD&D* carries a horrible mish-mash of wargaming rules over



from its tabletop origins, as well as some of the most convoluted and difficult sets of roleplaying rules ever written. You should probably only consider *AD&D* if you already have experience of it as a player.

Support material: There's a phenomenal amount, the biggest range available. If you can get into the rules, you'll never be stuck for reference and inspiration.

CALL OF CTHULHU

Based on the horror stories of HP Lovecraft and set in the 1920s, this game is all about finding and confronting an unspeakable horror that lurks just the other side of normality.

Background: Pretty easy for players to get into, the 1920s setting is

familiar to everybody who's seen a few Hollywood films. Some knowledge of HP Lovecraft's books is certainly an advantage, but is by no means compulsory.

Complexity: Undoubtedly one of the easier games for beginners to understand, *Call of Cthulhu's* rules are thankfully just a few pages long. The rest of the game is given over to the background and atmosphere of the *Cthulhu* setting.

Support material: Pretty good, really, from a large range of campaigns and adventures to an entire range of fiction.



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the gaming magazine

arcane

MAGIC

The Gathering™

ESSENTIAL TIPS!

The world's most popular collectable card game is about to be transformed into a CD-ROM game for the PC. And if you want to win, you're going to have to be armed with some card combinations which will knock out any opponent. Just like these, in fact...



Collectable card games are a spin-off from the roleplaying hobby. They have become very popular in the last couple of years, and the king of them all is *Magic: The Gathering*.

Each player assumes the role of a wizard who is armed with a collection of spells; each card in his 'deck' represents a spell, and throughout the game he must play his spells to kill his opponent.

The thing which sets *Magic* apart from standard card games is that each wizard creates his own deck of 60 cards from a pool of several thousand. So, whenever you come up against a new player you're not going to know what spells he's likely to cast. The key to winning is in the

selection of your cards and in choosing cards which work well together. These combinations are what all *Magic* players strive so hard to design, to give their deck the edge over their opponent's.

The cards used in the CD-ROM game are the same as those in the card game, and so are the crucial combos. Here we've compiled five of our favourite *Magic* card combos. Get hold of the CD version, or play the card version of *Magic*, and give them a go. Don't worry if you're unfamiliar with the terms used – they're explained in the CD game, and in the standard *Magic* rules.



NOW YOU SEE ME...

This is a simple combination, but one which can give you a quick start in the game. Cast a simple, low-powered creature, and then enchant him with *Unstable Mutation*. This latter spell gives the creature a huge



boost in his power and his toughness, but it'll end up killing him. However, you can prevent his untimely death by casting *Unsummon* on him to return him to your hand, ready for recasting next turn.

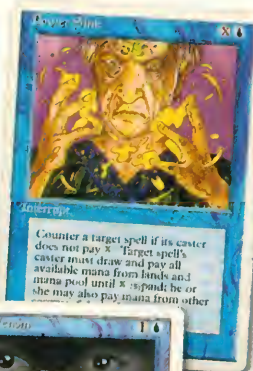
PAYMENT IN BLOOD

The cost of using a land upon



which *Psychic Venom* has been cast is high – every time you use the land card you lose two life. This can be made

crushing when used in conjunction with *Power Sink*, a spell which counters you opponent's spells when they're cast, and which forces them to use up the power of every other land they've got in play. Of course, those are going to include ones which you've cast *Psychic Venom* on. The only problem here is if your opponent has more land than you, so keep yourself topped right up with *Land Tax*.



What the hell is... Roleplaying???

STAR WARS



Inspired by the original movies, *The Star Wars Roleplaying Game* from West End Games offers players opportunities for adventure in one of the most popular

fictional settings ever created. In many ways this is the perfect system for new players and refs, especially the most recent version (arcane 12).

Background: If you've seen the movies, you'll have a good grasp of the game's background.

Complexity: *Star Wars* is based around a simple rules system that

only uses normal, six-sided dice. Not only is it a breeze for both players and referees to learn, but it encourages heroic actions in true *Star Wars* style.

Support material: There's a vast range of novels and comics to draw from. West End Games continues to produce sourcebooks and supplements, as well as original adventures and other material.

TRAVELLER

The original science fiction roleplaying game, *Traveller* is one of the oldest games systems and



a new edition has recently been released by Imperium Games (arcane 10). It concentrates on straight sci-fi tales of space travel and exploration.

Background: Inspired by the 'hard' science fiction of authors such as Asimov and Clarke, *Traveller* is set in a vast interstellar empire, the Imperium. Anyone who's read much sci-fi will find it accessible.

Complexity: The latest version has revised the rules system, making it more logical and easier to learn. There's still quite a bit to take in, but it shouldn't prove too difficult.

Support material: Over the years since the game's original release, heaps of supplements and sourcebooks have been released. Sadly, all are now out of print, but fortunately Imperium Games has a whole line of books scheduled for release over the next year.

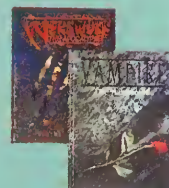
WORLD OF DARKNESS

A group of five systems from White Wolf: *Vampire: The Masquerade*, *Werewolf: The Apocalypse*, *Mage: The Ascension*, *Wraith: The Oblivion* and *Changeling: The Dreaming*. All use the same rules and setting.

Background: The World of Darkness is a nastier version of our own world in which vampires, werewolves, mages, ghosts and faeries struggle for supremacy.

Complexity: The rules are fairly simple. There are a lot of unique terms in each game, and the themes running throughout are complex.

Support material: An impressive range of sourcebooks, supplements and adventures is available.





GREAT BALLS OF FIRE



Fireball can wreck havoc on an opponent – it's a fast way to do lots of damage. However, you need plenty of land (cards which provide the power to cast spells) free in order to deliver a lethal blow. Change that by using Channel, a card which enables you to trade your own life points for Mana (the power that lands produce), and then use Fork to double the effect of the fireball for maximum fire power.



COME AND HAVE A GO...

...if you think you're hard enough. And if you're up against the mighty Uncle Istvan, then it's unlikely that you are, because any damage he's dealt by creatures he completely ignores. So, enhance him with Lure, which forces all creatures to block him when he attacks, and Venom, which kills all creatures that block him, and you've got a mad axeman that just keeps on coming and never stops killing. And if you place Regeneration on him as well, he'll live forever. What a guy.

WATCH YOUR BACK



The Royal Assassin is a killer, but then you'd expect that really. To attack with a creature you've got to turn it on its side, or 'tap' it, but to do so leaves that creature open to the Assassin's special ability which enables him to instantly kill any tapped creature. But he gets nastier still if Kismet is in play, because this spell makes all of your opponent's creatures come into play already tapped, laying them open to the Assassin's knife even before they've had a chance to attack. That's just plain vicious.

GET TWO CARDS FROM THE VISIONS EXPANSION SET FREE!



CAN I GET MORE INFO ON MAGIC

Just about every month we run a *Magic: The Gathering* related review, feature or news item in *arcane*, and whenever a new expansion set (a new set of extra cards) is released, we give away preview cards on the cover of the mag.

Our next *Magic: The Gathering* promotion takes place with issue 15 of *arcane*. On that issue we'll be carrying two cards from the *Visions* expansion set, due out in January. Look out for that issue, on sale Friday 27th December.



CAN I GET HOLD OF MAGIC

Magic: The Gathering cards can now be bought in just about any town or city, because WH Smiths has recently started stocking them. Packs of cards (which come in 60-card 'starter decks', or 15-card 'booster packs') are also available in specialist game stores dotted all over the country. The MicroProse CD-ROM version of the game will be available wherever you usually buy your PC games, and will be priced at around £40.



Can I get hold of back issues?



Issue 11 looked at cyberpunk, reported from GenCon and took you to the Circus in Encounters. We also reviewed *Fading Suns*.

Issue 12 debated the use of politics in RPGs, climbed aboard the Pirate Ship in Encounters and reviewed a revised *Star Wars* roleplaying game.



Farewell for now...

I hope that over the last half-a-dozen pages we've managed to give you a decent taste of what *Future Publishing's* roleplaying and collectable card games magazine is like. The roleplaying hobby is really starting to thrive again, just as it did in the middle 1980s, and that's probably down to the way that computer games, especially PC games, have introduced gamers to the concept of roleplaying. So, if you're into RPGs on the PC, or if you love gaming in general, pick up a copy of *arcane* and discover what's out there for you.



Paul Pettengale editor, *arcane*

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ARCPFC



Closing down border is a more difficult proposition in *Ultimate Risk*, purple turbans or no purple turbans.



Ultimate Risk's fully rendered battle-boxes partly make up for the inevitable lack of around-the-table banter.

RISKING IT ONLINE

With Hasbro's *Risk*, you can beat your friends without the logistical nightmare of securing a board, capturing a living room table and synchronising the D-Day of player arrival. Instead, you can simply call them over the Internet as *Risk* is fully multi-player enabled. Each copy also comes with two discs, a master and a slave, making LAN play a cinch. Thus you get the convenience of computer play combined with the intelligence of human opponents. Subject to your mates.

RISK

Does Hasbro Interactive's attempt at digital *Risk* kick ass or is it another donkey?



Risky business this. *Risk* fans, spoilt by the world's greatest wargame, demand perfection. And any attempt at modernisation chances creating the equivalent of cricket on rollerblades. So has Hasbro Interactive, with this *Classic* and *Ultimate Risk* melange, met its Waterloo? Yes and no. A proper basic *Risk* still eludes the PC. But the customisable, supercharged *Ultimate Risk* is eminently playable. Hasbro has rolled a two and a five.

You'd think classic *Risk* would be a doddle to program compared with today's real-time strategy games. But although simple, *Risk* is perfectly balanced. Borders, troop re-enforcements and the like are finely tailored for mental gymnastics. Replace the human brain with a clumsy, careless AI, and you'll rock the global balance faster than you can say, "Oops, someone's nicked my Plutonium."

So when your opponent leaves his borders open and fails to kill off players or seize complete continents, your enthusiasm wanes. When you don't know how many cards your opponents has, tactical play

becomes impossible. And when 50-odd troops arrive in Kamchatka without explanation, you inevitably smell a rat. The computer can't play *Risk*. Its forces bicker pointlessly, enabling another power to be victorious. At least with the boardgame you can make eloquent appeals to reason while the megalomaniac visits the toilet.

Classic Risk might occupy your mother but it's unlikely to satisfy real gamers. Luckily, Hasbro has a second shot with *Ultimate Risk*. This fully customisable Risk-based conquest game is far more satisfying.

Ultimate Risk adds new features to the game like terrain, generals, forts and weather conditions. Most significantly, its maps are far more fragmented, consisting of maybe 100 territories. Most continents have several borders and conquering even a corner takes hours. This extra complexity saves *Ultimate Risk*. Although the AI is probably no smarter than in the classic game, it's more difficult for it to make stupid, game-ruining decisions.

Winning takes patience. Just like in the 18th century, you use super-strong armies to weaken the opposition, then send in

secondary units to mop up and secure the borders. You must also keep troops 'in country' to quell uprisings. Then there's the chance of plagues, landslides or floods.

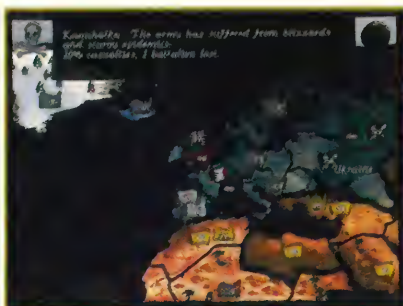
There are problems, particularly with combat. In one game, France moved troops out of Wales, enabling a lone rebel to don leeks and raise the national flag. 50 troops attempting to retake the valleys saw this single unit – a fearsome blend of Che Guevara, Owain Glyndwr and Mr T – killing 14 opponents, including the general, and taking another 15 POWs. That's just not cricket. When battling, each side first blindly chooses a combat tactic. The result seems partly determined by a paper-scissors-stones style calculation, which enables preposterous heroics like the above.

Ultimate Risk gets repetitive. You don't do much more than move huge troop blocks around. You can reconfigure the game, but there's not much difference between taking continents or capitals. Still, with its drums and boldly coloured cannon fodder, it's compelling and enjoyable. Pass the pointy sticks, Ghengis. (OB)

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PC REVIEW VERDICT
The new features create an enthralling challenge, but don't bin your boardgame just yet.

7



The maps in *Risk* are fleshed out with satellite imagery. And there's no coffee stains.



The battle boxes in *Risk* provide an element of excitement, but there's no interaction.



The higher ranking your generals, the more tactics they can arbitrarily choose from.



Microsoft FLIGHT

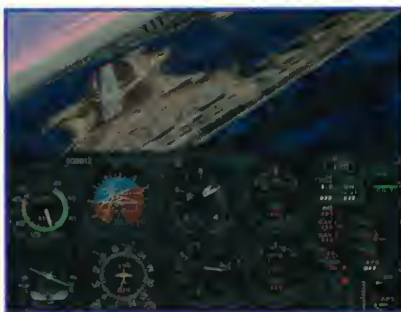
Put down those guns and flamethrowers and experience the joys of a peaceful flight through the skies.



A typical Cessna flight showing the Chicago skyscrapers at dusk.

Can you remember the days in the early 80s when *MS Flight Simulator* was used to benchmark whether third-party PC offerings were true IBM compatibles? The machines would boast the big rubber stamp of approval if they could run it. This fact alone highlights the pedigree behind the latest version of Microsoft's *Flight Sim*, which was originally earmarked to be called version 6.0 but instead is now badged for Windows 95.

Anyone who's been using version 5.1 for a while will be pleased to know that you now have a choice of six aircraft models instead of four. The new planes are a Boeing 737-400 and the aerobatic Extra 300S. Using *FS95*, you will not need to rush out and buy a collection of add-on scenery disks (although your old ones will still work) as *FS95* includes the scenery add-ons for New York, Paris and Las Vegas. Additional scenery support will allow you to buzz the Houses of Commons or fly past St. Paul's,



Now, let's try approaching Meig's airport in Chicago in that selfsame Cessna.

and you can also take off from Tokyo, Rio de Janeiro, Washington DC, Athens, Toronto, Atlanta, Moscow, Berlin or even Jerusalem amongst other places.

Other new features include a comprehensive multimedia pilot's Help which describes in detail aspects of the Flight School. You'll find all you need to know about any of the aircraft included, and how to fly them, plus tips about using and customising the flight simulator. There is an Airport/Facility directory which provides information about airports, locations, runways, ATIS, ILS, VORs and so on – a must for anybody who would like to get a real insight into how civil aviation pilots navigate the skies.

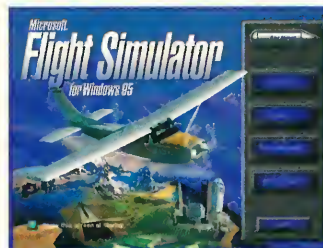
But how does *FS95* fare as far as aeronautical realism and photo-realistic



Have you ever thought you could fly so close to Big Ben?

scenery are concerned? These must be the two major components that separate serious flying simulators from the combat games which mainly rely on quick action and little focus on realistic scenery and true aerodynamic behaviour. *FS95* then, is firmly in the latter camp, a flight simulator which requires a thorough understanding of the basics of flying an airplane and navigating it through various scenarios and weather conditions. It is almost a game for those flying enthusiasts who would really like to be up there in the real thing, but

use *FS95* as a cheaper, safer and more practical alternative to explore various boundaries. Some combine the use of the simulator to reinforce what they have learnt in actual flying lessons in preparation for



The main menu shows the various options available to you.

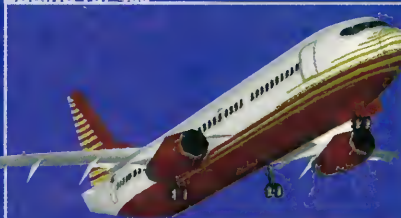
WAITING FOR YOU IN THE HANGAR

CESSNA SKYLANE RG R182



A very standard small plane. The sort of thing private pilots use. Boring.

BOEING 737-400



Better than the 70s original, this is the ubiquitous short range people carrier.

SCHWEIZER 2-32 SAIL PLANE



Your smooth sleek glider is very quiet, except when it crashes.

SIMULATOR



Fly by Tower Bridge
in London.

for Windows 95



You are not alone! There are other
pilots in busy airports out there.



Chicago's O'Hare airport at night.
Dark, isn't it. Windy too.

obtaining their PPL (Private Pilot's License). Although you're sitting comfortably in your study and would not feel the air bumps, the realism of the simulator is rather remarkable.

As for the graphics, FS95 runs in true SVGA resolution of 640 x 480, which is an improvement over version 5.1. One word of caution however, the speed of your PC is going to be crucial in giving you the performance and refresh rate you need for the simulation to be realistic and responsive to your keyboard or joystick. We found the game barely ran on a 486DX2/33Mhz with 20Mb RAM. The only way round this problem was to turn off most of the demanding display options, which is not much fun. A 166MHz Pentium however took all we could throw at it and performed admirably.

Frankly, we were disappointed with the lack of any new advanced graphics technology to improve the scenic realism. It appears that Microsoft has recycled the same graphics technology as used in the previous

versions without exploiting any of their new graphics APIs or any of the recent advances in the military or civilian flight simulator technology. Despite that, some sky and cloud effects are reasonably good. You could also fly or try to land in misty or foggy conditions. The rendering of the polygon models of the aircraft is reasonable but could be improved. The window views are almost identical to those in 5.1 with the option of a map, 3D view, a tower view, a cockpit view or a spot plane view.

If you are a beginner, the flying lessons are the best place to start. The lessons will introduce you to basic traffic patterns, normal and crosswind landing techniques as well as climbs, turns and descents and take-off and departure stall techniques. The lessons could be taken in a predefined sequence or selected at random. You could also ask the instructor to run through the lesson while you watch. The digitised voice of the instructor literally talks you through the

various procedures and sometimes makes you sweat when he sternly tells you to 'Watch your altitude!' but on the other hand congratulates you warmly on a good bank or a perfect landing. If you also find the array of instruments daunting, you could use the mouse to point at any instrument in the panel and a caption appears describing what the instrument does.

Obviously, FS95 is still a great game and probably one of the best flight simulation programs on the market, providing the flying enthusiast with an opportunity to turn a joystick and a PC into a Cessna or a Boeing 737-400 and fly around the world. Unfortunately, FS95 is essentially not significantly different from the previous DOS version 5.1, although the user interface is much slicker and easier to use. Microsoft has passed up on the chance to take a quantum leap-sized improvement in photo-realistic scenery which would have increased its appeal several fold. (JA)

DEVELOPER
Microsoft
PUBLISHER
Microsoft
PRICE
£49.99
CONTACT
0345 002000
MINIMUM SYSTEM
486/66, 8Mb RAM,
40Mb hard disk space,
SVGA, CD drive

PC REVIEW VERDICT
Good flight sim
which includes
a number of
scenery add-ons
and six aircraft
types. Realistic,
but graphics
could have been
greatly
improved.

7

SOPWITH CAMEL



Top World War I fighter which had a
massive torque to the left. Tricky.

LEARJET 35A



Nippy little business jet, the kind high-rollers
buy to, er... roll high. Nice 50s design.

EXTRA 300S



A loop-the-loop aerobatic stunt plane. Can
you do the cobra?



GOOD ENOUGH TO EAT

You've visited the country, you've played the game, now eat the food. Among the oddities and puzzles within *Clandestiny*'s haunted castle, players can find a handy recipe book, packed with classic recipes from Scotland, including the legendary veggie nightmare, haggis. So who says that edutainment games don't work?



Taking a more comical and cartoonish stab at the horror genre than Trilobyte's previous efforts, *Clandestiny* proves an odd mix.



CLANDESTINITY

Trilobyte's ploy to bring the parlour game back into vogue continues with a strangely familiar format.



The cartoon's are accomplished, and if central characters such as Paula are a dull, the collection of less-than-alive weirdos hits the spot.

DEVELOPER
Trilobyte
PUBLISHER
Electronic Arts
CONTACT
01753 549442
PRICE
£39.99

MINIMUM SYSTEM
P60, 8Mb RAM, double speed CD drive, 8Mb hard disk space, SVGA video card, Windows 95

The same old format, but with nice cartoons among the cerebellum bashing.

PC REVIEW VERDICT

6

You have to wonder what the boys and girls of *Clandestiny*'s development team Trilobyte do in their spare time. Solve Mensa problems for breakfast? Do the Times crossword while on the loo? Or simply just sit around attempting to out-baffle each other with the latest cunning conundrum or loony logic problem. They obviously can't get enough of that mind-expanding stuff. Maybe they need to relax, work less hours or take a holiday.

The game's protagonists, Andrew MacPhiles and his girlfriend Paula, star in this retelling of the old 'Americans Inherit Someplace Spooky' story. But when they arrive at his ancestral castle it's almost deserted, and the only staff seem to have a severe case of death.

Not that it's stopped them going about their business, mind. It just means that the multitude of locked doors don't pose any

problems to their insubstantial forms. Andrew unlocks doors by solving riddles; a sense of déjà vu sweeps over anybody who has played *7th Guest* or *11th Hour*.

Whether or not you've ever stepped foot in bonny Scotland, chances are you've been here before. *Clandestiny* may swap the sinister goings on for a more jokey kind of spooky story, but essentially this is a Trilobyte game by numbers. Which is just the ticket if those puzzles are what floats your balloon. But after the Scooby Doo hi-jinks hinted at by the animated cartoon intro, to be dumped in a shiny pre-rendered adventure game environment isn't really on. Particularly when it's an environment with mindgames crowbarred into it in inimitable Trilobyte style.

For a game so obsessed with logic, it's odd that the connection between the storyline – which unfolds in cartoon sequences as progress is made – and the puzzly bits finds

logic absent without leave. Still, it never harmed *7th Guest* and *11th Hour* any.

But with *7th Guest*, at least the wonderful graphics masked the disjointed nature of the gameplay. Third time around and every other game boasts cool rendered images and cartoon sequences. Despite the Hanna Barbara style, *Clandestiny* doesn't do anything its predecessors didn't – a dangerous thing when your game format is rather slight to start with. But there are a few nice touches – the gags are OK, and the characterisation is quality stuff. And despite the questionable take on Scotland's rich accent, there's a fair amount of evocative detail beyond bonny heather references.

But will the average gamer stump up for another round of solve-the-riddle, re-arrange the sugarlumps, or whatever else Trilobyte's obviously mad designers can come up with? Pish, will they. (MR)

What a picture



The cowardly Andrew MacPhiles, and his annoyingly smiley girlfriend Paula, in one of the impressive animated sequences that unfolds as puzzles are solved.



The rendered environments are great, but movement isn't animated and they don't blend with the cartoon bits.



Clues are available for those who aren't card-carrying Mensa members or Times crossword champions.



SHATTERED STEEL

Two-legged droids battle it out on laser-scarred alien worlds. Is it yet another post-Mech Warrior blast?



Far less weighty than the other mech-style games out there, *Shattered Steel* scores with a love of firepower, some cool lighting effects and ultra-fast gameplay.

Blame those *Star Wars* movies. Countless re-runs of *The Empire Strikes Back* have left every games programmer in the world with the belief that the future will be populated by human-carrying robotic war machines. Robots that walk on two legs, at that. Still, a game where the player gets to peel melanomas from their skin before going off in search of something in the food chain that isn't poisoned, probably wouldn't be much fun. So, enough of the ecology lecture!

Shattered Steel is a game of the *Mech Warrior/Earthsiege* ilk. It features lots of robots on two legs, a fair few with more insect-like design, and a bunch of airborne bad guys who skulk around like they're straight out of a familiar Schwarzenegger sci-fi movie. Against the odds, it's only the basic concept that feels like yesterday's news, because – thanks to natty shoot-'em-up oriented gameplay and a clever mixture of light-sourced polygonal graphics and voxel landscapes (as featured with less success in old Novalogic games) – *Shattered Steel* has a style all its own. Where those Mechs and

Herc games wanted so badly to be thought of as futuristic sims, *Shattered Steel* just wants to blow you away with its big guns and arcade simplicity. Which can't be bad.

Offset against all the *Terminator*-esque moodiness of the game, however, there are some glaring goofs. Like the way some droids walk with all the weight and menace of arthritic chickens; robotic raptors they're not. And while having the enemy aircraft cast shadows and illuminate the ground with

searchlights is fantastic, why doesn't anything on the ground cast a shadow? It's a shortcut which prevents the droids from ever really looking like they're walking over those nicely-contoured landscapes.

The determination to make this a fast blast has its downside, too. Whacking a turbo in the engine of the old robot

wars concept is all very well, but making any kind of turret movement so jerky as to make fine-aiming nigh on impossible wins no awards whatsoever. In a lesser game these aesthetic and gameplay niggles would really grind. As it is, these silly flaws are soon

forgotten as the rapid fire gameplay and ace visual effects kick in. There's a wonderful sensation of sensory overload here, what with combat that often involves fending off enemies from every compass direction, and using the lay of the land to gain the upper hand. Not since *Terra Nova* has a landscape felt so integral to a game, rather than simple window dressing.

But not even *Terra Nova* can conjure up images as noir-ish as these. Brooding landscapes are set ablaze by terrific explosions, while laser fire and missile trails burn their way through the action, lighting the various vehicles as well as terrain. On later levels, when the weapons get more spectacular and the enemy forces more formidable, the game is capable of generating the most overcrowded war scenes this side of the movie theatre. This could almost be some game set in that future depicted in the *Terminator* movies.

It lacks the robotic fetishism of other robot games, and the lack of simulation-style bells 'n' whistles mean it's not as involving. But what it loses in the grace and complexity stakes, *Shattered Steel* makes up for with breathtakingly rapid action. And the ability to bump the player right in the middle of the best-looking future war battles around shouldn't be underestimated, either. **(MR)**



The design of the craft is reminiscent of the *Terminator* movies, right down to the powerful search lights.

Taking the scenic route



1 *Shattered Steel*'s graphic engine portrays wildly varying scenes with little more than a few changes in palette. Floodlight-friendly night scenes change to dawn scenes...



2 And on to processing plant protection missions, carried out in the blinding desert heat. It certainly makes picking off those distant robots that bit easier.



The reptile-like enemy mechs look vicious, but a few blasts and they're mechanical dog-food. Far trickier are the spider-like buggers that crop up on practically every level.

THE MECH-PECKING ORDER

This whole 'big robots slugging it out' thing really got going with the original *Mechwarrior*, from Activision, actually licensed from the tabletop strategy game. Unfortunately, the game was a bit crap, so when Sierra turned up with the similarly themed *Earthsiege* in '94 the PC-owning world naturally fell over itself to appreciate its beefy fighting machines and spectacular texture-mapped vistas. Not one to take this sort of thing lying down, Activision returned with *Mechwarrior 2*, a world away from its predecessor, boasting brilliantly minimal SVGA graphics and several hundred different controls to master. This in turn was superseded by *Earthsiege 2* – more of the same but with airborne missions and better detailed SVGA 3D than its competitor. Now we've got *Mechwarrior 2: The Clans*, *Shattered Steel*, and... that's quite enough games with big robots, thank you very much.

DEVELOPER

Interplay

PUBLISHER

Interplay

CONTACT

01628 423666

PRICE

£44.99

MINIMUM SYSTEM

486/66, 8Mb RAM, 25Mb hard disk space, double speed CD drive, SVGA video card, supports Win95

PC REVIEW VERDICT

Not quite as fulfilling as its peers, but fast, furious and amazingly cinematic. Nice one.

7

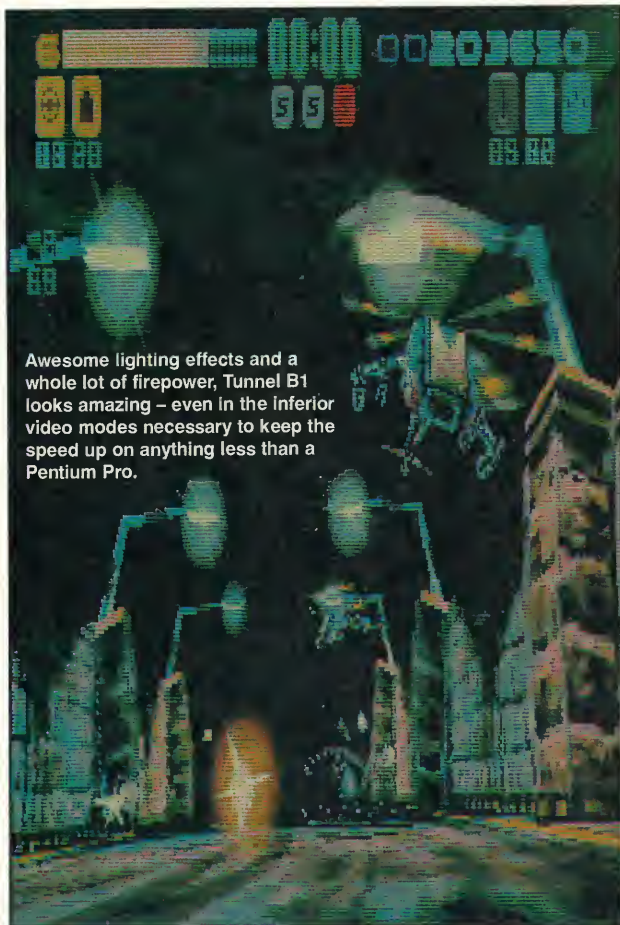


THE SOUND OF VIOLENCE

Special mention has to go to *Tunnel B1*'s soundtracks. A collection of brooding tunes heightens the already palpable tension, evoking the best audio moments from John Carpenter's movies. Carpenter, who has directed such cinematic masterpieces as *The Thing*, *Assault On Precinct 13*, and, er, *Escape From New York*, also actually writes the music for his films. The reason? He claims it's to make his movies that bit cheaper to produce.



Curiously, the 3D system falls apart when objects are viewed up close. Like the walls and ground, for instance. Just look at that warping.



Awesome lighting effects and a whole lot of firepower, *Tunnel B1* looks amazing – even in the inferior video modes necessary to keep the speed up on anything less than a Pentium Pro.



The explosions are the real showstoppers in *Tunnel B1*. Here we see a bulky but weak hover vehicle attempting a getaway.



Here we see the very same hover vehicle about to find its bodywork littered all over the tunnel floor. Marshmallows, anybody?

Preceding a whole bunch of ambitious PC titles, Ocean gets into the swim of things with this much-touted high concept blaster.

TUNNEL B1

DEVELOPER

Neon

PUBLISHER

Ocean

PRICE

0161 832 6633

PRICE

£39.99

MINIMUM SYSTEM

P90, 8Mb RAM, double speed CD drive, SVGA video card, mouse, supports Win95, soundcard

Looks like a good dream, but plays a little too much like a recurring one. Classy stuff, all the same.

PC REVIEW VERDICT



Take a tunnel, a time limit, some guns and a few bad guys. That's not just *Tunnel B1* in a nutshell, it's the entire game design. Which can either be viewed as a brilliant back-to-basics approach, or a foolishly basic concept which really must pack a lot of flash to disguise the lack of much in the way of diversity. *Tunnel B1* travels a path somewhere between the two. Dumb, but fun and full of comely visuals.

Tunnel B1 doesn't have much in the way of surprises, variation on shoot-'em-up

theme, or even multiple camera angles, then. Happily, what it does possess in pretty staggering quantities are the sort of cool graphical tricks and effects that mark it as a very happening, now sort of game. In the world of *Tunnel B1*, lights really illuminate, lasers fire out genuinely translucent beams, and explosions look like Bonfire Night as depicted by Ridley 'moody lightning' Scott. It's the way the screen almost bursts with fire and smoke that knocks the senses for six.

By which time the bad guys have moved in for the kill, and you're highly blackened toast. Unless you attempt to play the game in full SVGA mode, that is.

Whereupon even your prized P120 will perform an amazingly accurate impression of those slow motion bits in action movies. A shame, that, considering the other two screen modes are far inferior.

There are other marks of greatness about the game. Like the inertia-tinged control system which gives scope for some really neat driving techniques. Or the level

designs which transform what should be long, dull tunnels into clever mazes packed with goodies and traps.

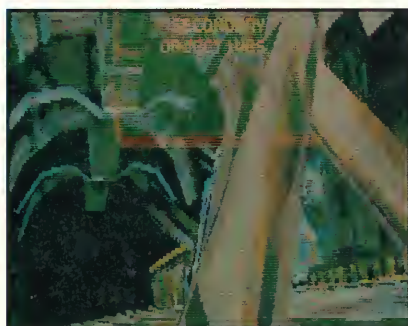
Even the enemies – from the gun turrets to ground-based and airborne vehicles – are cool, despite the fact they don't do very much. That they give rise to all that fire-fighting is enough, particularly on later levels when your weaponry can be unleashed.

This stylishness only disguises the simplicity for so long. Drive, shoot, pull a skid – there's only so much that can be milked from a game which considers switch-

activated doors the height of complexity. Yes, *Tunnel B1* is cool. Yes, it looks like a million dollars. And yes, as mindless gun-fests go, this is about as explosive as you

can get. But behind all this show, *Tunnel B1* is just a little bit of a no-brainer. Which is great if supermodels are your thing, but if you're looking for that long-term video game relationship, you'd do better lavishing your attentions on something with a little less sass and a touch more suss. (MR)

Explosions look like Bonfire Night as depicted by Ridley 'moody lightning' Scott



Impassable or explosive obstacles are the biggest hindrance in the game. Much use of the slide controls is needed to race around the later levels in the time provided.

this planet earth ltd

A GLOBAL REVOLUTION

the DALEK is here



Actual photograph of the Daleks produced by 'this planet earth ltd'

At last it is possible to buy a full size Dalek, and here at 'this planet earth' we are taking orders to enable Christmas deliveries. The full size reproduction prop is taken from mouldings obtained from BBC Visual Effects and presents for purchase a replica that is as close to the actual TV Dalek's as possible.

This is the first time that the full size Dalek has been available fully licensed by BBC Worldwide. This is a landmark in the history of Doctor Who and 'this planet earth' are proud to be part of it.

The Dalek is manufactured mainly in fibreglass and weighs a substantial 40kg. Each Dalek comes with a serial number plate and certificate of authenticity.

The Dalek can be purchased in two colour schemes, grey and black Renegade and also black and silver Supreme.

Pricing: Grey / Black Renegade £1495 + £58.75 p&p

Black / Silver Supreme £1595 + £58.75 p&p

(All prices include VAT) payment options are available for an order form and details without obligation

Write to: Ian Clarke, Dept PCF,
this planet earth ltd, PO Box 521,
Kingsgrove, Stoke-on-Trent,
Staffs ST7 3TT

or Telephone: 0378 752624



Where will you go when the sofa becomes too small to hide behind?

Doctor Who and the Doctor Who diamond logo © BBC 1973. The Daleks device mark © BBC / Terry Nation 1963. Licensed by BBC Worldwide Ltd

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The control system takes some practice.

SPECIAL CUPS

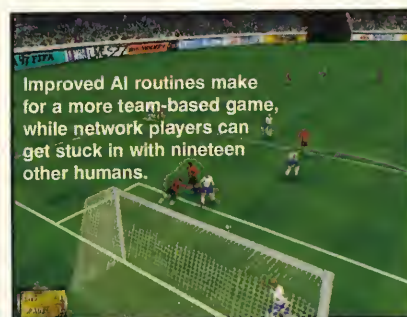
The next FIFA game from Electronic Arts promises to be a rather more strategic affair, forsaking those gorgeous-looking polygon-based players for a more statistic-based presentation style. FIFA Soccer Manager will be with us early in 1997, followed by another football game which isn't actually a FIFA title at all. Instead, you can expect to see the enhanced Virtual Stadium system put through its paces in a World Cup licence, which will include the facility to play matches right through every round leading up to the World Cup Final itself.



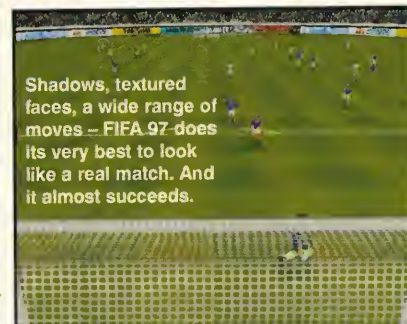
FIFA 97 introduces a new technique called Motion Blending to make all those motion captured joint movements that bit more interactive. David Ginola is the man behind those moves.

FIFA 97

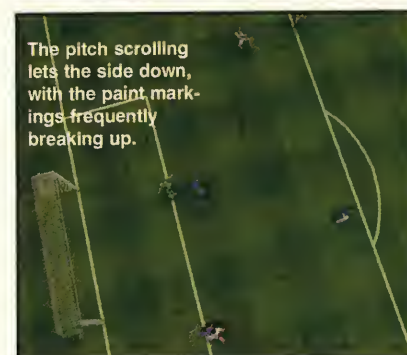
The FIFA legend rumbles on, adding yet more lavish presentation and players so realistic they've all got bad haircuts.



Improved AI routines make for a more team-based game, while network players can get stuck in with nineteen other humans.



Shadows, textured faces, a wide range of moves – FIFA 97 does its very best to look like a real match. And it almost succeeds.



The pitch scrolling lets the side down, with the paint markings frequently breaking up.

DEVELOPER
EA Canada
PUBLISHER
Electronic Arts
CONTACT
01753 549442
PRICE
£45

MINIMUM SYSTEM
Pentium 75, 8Mb RAM,
45Mb hard disk space,
CD drive, soundcard,
Win95

It's a real feast for the senses, but that sluggish sticky pudding of a control system is a bummer

PC REVIEW VERDICT



There's a very definite kind of game player who appreciates the finer point of EA's FIFA games. These are the people who surrender themselves to the whole spectacle of the nation's favourite sport, thus lapping up the amazing graphical tricks, official player names and voiceovers, and getting well into the MTV-esque presentation of the thing. These are not the people who find nirvana in *Sensible Soccer*, a game of inner beauty, but a pig-ugly exterior. It's likely you already have a good idea of whether *FIFA 97* is the game for you, then. But, as is so often the case things are quite as cut and dried as that.

Obviously *FIFA 97* looks, sounds and moves just as good as anyone could really hope for. Electronic Arts' sports games have long been leaders in the field of presentation and this latest title ups the ante yet further, using motion capture techniques to better effect than any of the other 3D footy titles, as well as pumping jolly video sequences onto the screen in between the dreamily smooth on-pitch action. And with much improved Virtual Stadium technology the game manages to run smoother than its predecessor yet look at least twice as good, what with its cheering, dancing, rainbow-kicking players. Though quite why they have been designed

with hip to leg connections that resemble Vic Reeves doing his bandy-legged walk is something of a mystery. Maybe it's because they're shooting stars. Ahem.

The match options are dazzlingly complete, and the match commentary has been further refined, with wise words from both John Motson and Andy Gray, as well as introductions from old smoothie Des Lynam. Some of the stock phrases fail to match the actual on-screen action, but this is about as close to real sports coverage as you're likely to get without actually hiring one of them to come over to your house and chat away while you play the game.

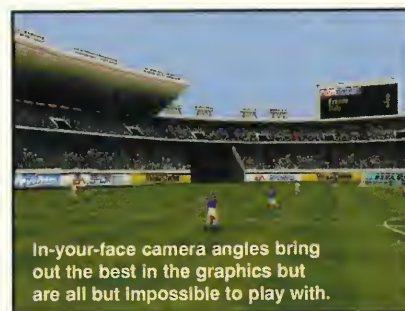
FIFA 97 is spookily amazing on pretty much every level, then. Except for the small matter of gameplay. The 96 edition of the game displayed the worrying trend of designing the game around visual authenticity. Those fluid movements and computer-assisted controls made for a graphical treat, but they were also responsible for real short-

falls in fast, precise player and ball control. Those willing to persevere with *FIFA 97* will discover that the problem has been addressed to some extent with even greater tackling, passing and shooting subtleties. But novices will find the sluggish player response ridiculous. Realism is all very well,

but here it means strategies have to take into account strange delays and idiosyncrasies. Fans of such old fashioned concepts as direct player control will most certainly not like that.

FIFA 97 is by turns drop-dead gorgeous, a crashing disappointment, and then some-

thing of a grower. There are hidden depths which make mastery of the ball a thing to really work towards. And in the meantime there are always those amazing interludes and real-time 3D treats to chew over. But underneath there's always the nagging feeling that gameplay has been sacrificed for sheer spectacle. Many will feel that the spirit of the game got lost somewhere on the way to the stadium. (MR)



In-your-face camera angles bring out the best in the graphics but are all but impossible to play with.

With much improved Virtual Stadium technology the game manages to run even smoother than its predecessor.



NHL97



ICE, ICE BABY

Feeling a little confused about this whole ice hockey thing? Why not point your web browser over to: <http://www.nhl.com>.



Here you'll find the official NHL homepage, complete with scores and stats, features, information on the teams, and news that the Pittsburgh Penguins have won the Duracell Power-Play Award. And if all that doesn't clear things up for you, just imagine rugby with funny sticks. And ice.

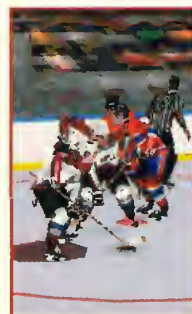
Two teams chasing one object, each ready to break the other's bones to win. The PC Review team is out on the ice.



A still taken from the game can't really convey the balletic movements of the players.



The crowd, the ad boards, even the ice rink detail can be removed to ensure a fluid game.



Ever been hit by 16 stone of polygons?

Ice hockey is not what you'd describe as ideal family entertainment. You certainly wouldn't find such body damage in a round of cricket. And not even British football can match it for sheer grace, pace, or raw machismo. This is the original extreme sport, kinetic overload, fast cuts, extreme close-ups and all. Which obviously makes it ideal material for a computer game simulation, particularly given that the slip-sliding nature of the pitch ensures that the action never comes to a standstill.

As with last year's *FIFA* release, *NHL 96* was an impressive marriage of graphical technology and familiar EA Sports gameplay. Similarly, this year's update has just as many graphical and presentation advances as *FIFA 97*, what with all manner of rock track accompaniments for the intro screens, and an improved Virtual Stadium system capable of knocking out a more detailed pitch.

It's the players themselves that show the greatest advance, though, impressing far more than the *FIFA* characters, despite the fact that they appear to possess few motion-captured moves.

These guys simply look right – their bulky polygonal frames work hard to convey a real sense of weight, and the excellent texturing brings the livery of the real NHL league to the screen. But the detail doesn't stop there. The polygonal characters here don't just have cool textured faces, they have features mapped from real NHL players, different expressions and all.

True, the sort of camera modes which rely put these effects in the spotlight aren't even remotely practical for actual play. But there are enough zooms and pans during face-offs and the like to bring the ridiculous level of detail to the viewer's attention.

They have features mapped from real NHL players.

a real sense of weight, and the excellent texturing brings the livery of the real NHL league to the screen. But the detail doesn't stop there. The

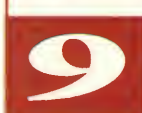
It would be fair to expect a crushing average game beneath such extensive and expensive wrapping. But no, EA's hockey games were solidly constructed a few years back, and they just keep getting better. Believable computer strategies work well, with signature moves even featuring in the star players' repertoire. And the control, while still reliably simple, has been tweaked just that little bit to accommodate quick skating bursts and other subtleties. And naturally, being an official NHL game, all the real players, real teams and real season structure is featured. Not that most Brits will care, of course. It's the masterful recreation of the actual in-game stuff that will cut it with most.

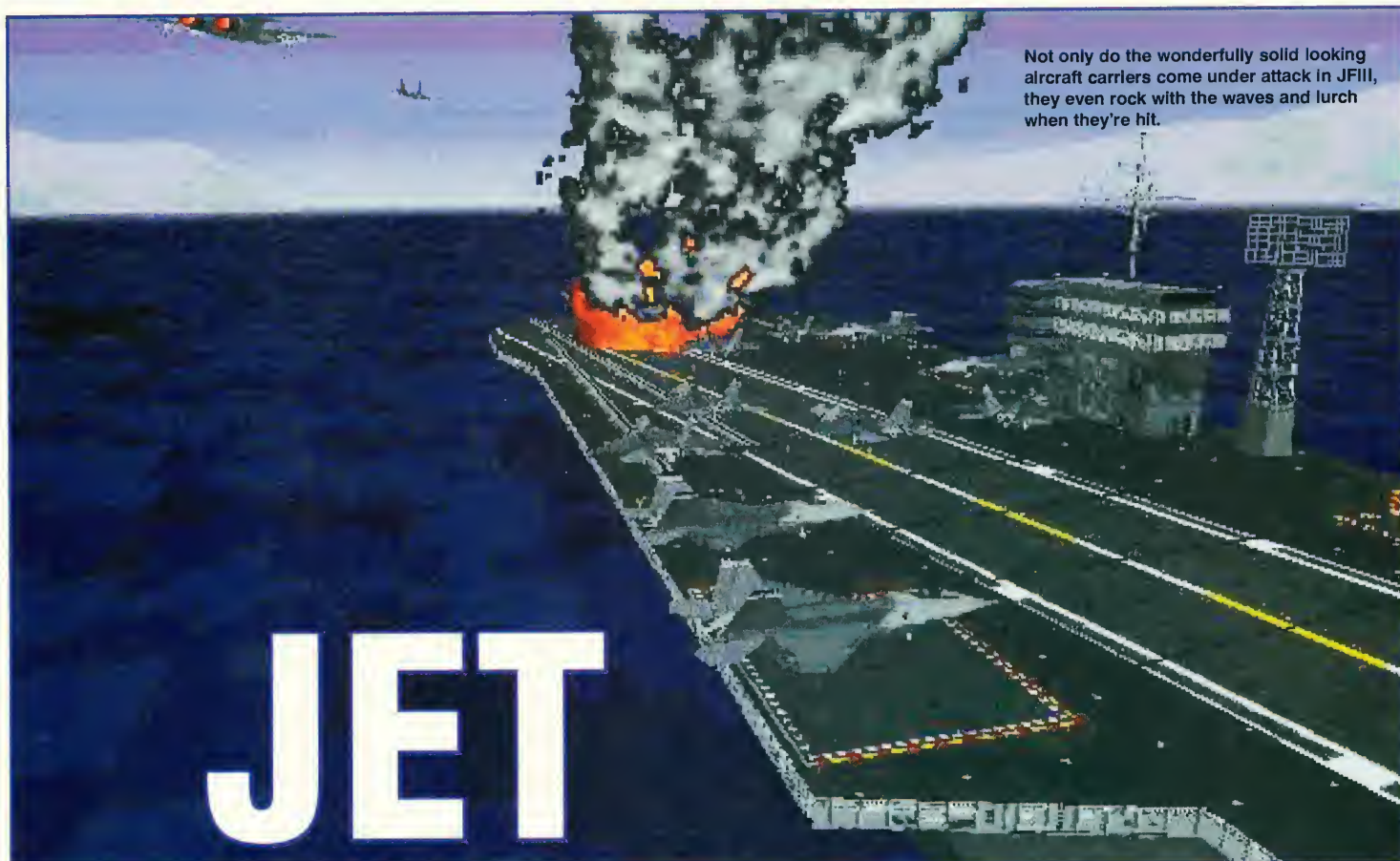
Granted, it only real swings its thing on a decent Pentium. But once the action starts, it's nothing less than poetry in motion. This then is the cutting edge. The game that's less hokey, more hockey. The game you love to skate. In other words, *NHL97* is nothing less than excellent. (MR)

DEVELOPER
EA Canada
PUBLISHER
Electronic Arts
CONTACT
01753549442
PRICE
£45
MINIMUM SYSTEM
P75, 8Mb RAM, 33Mb
disk space, double
speed CD, Win95

Lacks the populist appeal of the *FIFA* series, but this has to be the most evocative sports title ever.

PC REVIEW VERDICT





Not only do the wonderfully solid looking aircraft carriers come under attack in JFIII, they even rock with the waves and lurch when they're hit.

CD REVIEW

Fly into the wild (yes, wild) blue yonder with the massive four-mission demo of Jet Fighter III on our cover CD.

JET FIGHTER III



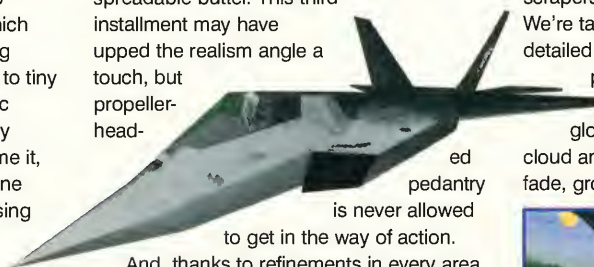
Some three years after stealing the action flight sim crown with Jet Fighter II, Mission Studios get ready to do it all over

Without wishing to get xenophobic here, American game developers seem to have something of a problem with reality. They just can't get enough of the thing, so it comes as no surprise that most of the flight sims which wing their way over from the States sag under the weight of so much attention to tiny details. Authentic flight models, realistic buffeting from weather effects, correctly operating weapons systems – you name it, the Yanks can ruin a good bit of airborne combat enjoyment by overly emphasising the minutiae.

You certainly wouldn't catch the British writing a *Flight Sim 6* or *Flight Unlimited*, where there's buggar all to do but take in the scenery. They want excitement. Action. Things to shoot at, basically. Of course they want it to look smart, and if the plane responds correctly when a wing is shot off all the better, but such anal features shouldn't be included ahead of fighting fun.

Which is where Mission Studios comes in. *Jet Fighter II* proved them to be the

exception to the rule. Created some three years ago, the game painted rich landscapes, threw up plenty of opportunities for scraps, and proved smoother than spreadable butter. This third installment may have upped the realism angle a touch, but propeller-head-



And, thanks to refinements in every area from the landscape detail to the weapon systems to the mission diversity, it not only proves a worthy successor, but beats the Hell out of pretty much every other flight sim going. Spiffing stuff.

Here, then, are ten easy steps detailing how a game gets to be the most exhilarating flight sim around. Step one – have the player fly over landscapes that actually look the part. A definite winner here, *JFIII* depicts a

sizeable chunk of South America and the islands south of Miami with skill, from the spot-on texturing of mountain ranges and green pastures to the cities with their skyscrapers and criss-cross road networks. We're talking 3.5 million square miles detailed right down to the position of telephone poles.

Step two – don't leave that glorious 3D looking flat. Convincing cloud and fog effects, a good horizon colour fade, ground shading cast in relation to the

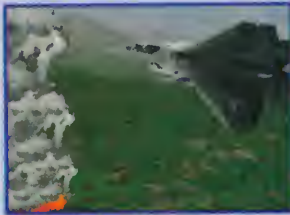


While some games offer a virtual cockpit option, *JFIII* stays in this mode at all times, making it easier to peek over your shoulder.

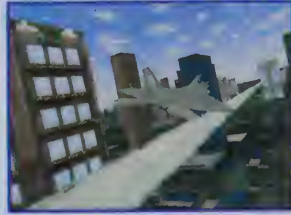


VERY SPECIAL EFFECTS

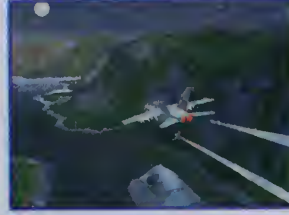
A quick sampling of the visual excellence offered by Jet Fighter III.



Ground explosions are a great mixture of fire and three dimensional smoke, which plumes up into the sky in a most convincing manner.



Firing missiles is every bit as hugely satisfying as it should be, thanks to larger than life trails, which build up and billow as the rocket passes into the distance.



Night missions are realistically handled with dances in the sky... by moonlight. Don't you just feel all toasty looking at the burning red afterburners?

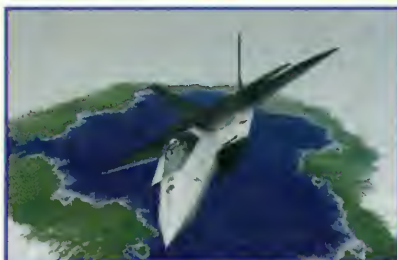


And then there are the mid-air explosions, which again manage to do a fair impression of real, spherical blasts. Blowing stuff up has never looked so good.

position of the sun, day to night sequences, and those all-important redouts, blackout and sun glares are all part and parcel of the *JFIII* visual extravaganza. But decent sky and ground graphics aren't much without step three – include awesomely realistic explosions. *JFIII*, thankfully, has very good 3D approximations of exploding missiles and, even better ones of the aircraft they hit.

Step four – give the player something to do. From the training section onwards, this is a flight sim which revels in new challenges. The tutorial sections alone make the most of the aspects of landing and take-off, as well as communicating with wingmen, flying between waypoints, and correctly using weapons systems to despatch targets as quickly and cleanly as possible. All good grounding which is put to use in the main campaign section. Which brings us to step five – offer missions, missions and more missions. About 90 of 'em are offered here, and while they lack the subtleties offered by a multi-strand structure, it's hard to argue with such diverse objectives, and an array of enemies that including fighters, copters, battleships, and military buildings.

Step six – live up to your name. As befits a game with the *Jet Fighter* moniker, this is a game big on air to air combat, be it from an F22 Lightning or an F/A-18 Hornet. What's more, it works brilliantly making for some fairly close encounters despite the long range nature of much of the weaponry. Obviously the choice visuals have a lot to do with the tension and excitement that these, and the air-to-ground skirmishes generate, but the splendid enemy AI deserves a mention too. Step seven – make it as deep as you like. Already finely balancing itself



Lakes and coastal stretches are particularly well depicted, though there's no animation of the surf against the land. Shame that.



A wealth of ground detail, ridiculously challenging campaigns to fight around Cuba and South America, and nail-biting dogfights – *Jet Fighter III* has got the lot.

between mindless arcade blast and true simulation, *JFIII* further endears itself to both gameplaying types by making it possible to adjust everything up to including whether or not the player's aircraft carrier rocks back and forth in the water.

Step eight – make it convincing, but not too much. The flight model here manages to convey a sense of aircraft weight and real physics, but that doesn't mean it takes years of practice keeping it in the air. Stupidly low level flying, fast turns, and all kinds of acrobatics are all possible here. Nearly there, with step nine – have a lot of front. *JFIII* wraps its missions up in plenty of rendered gloss, but also ensures that a variety of configuration, arming, and instant mission screens are all easily accessible and a breeze to use. The real die hards (or should that be top guns?) can even visit a library to read over 500 pages of photography laden information, or import photos of themselves for the pilot roster. It's even possible to create individual plane decals. Crazy.

Step ten – fly the friendly skies. In other words, make sure there are no niggling pauses while landscape data loads, keep things moving at a fair rate even on low spec PCs, and offer plenty of multi-player options. This is the point at which *JFIII* takes a hit and begins spinning uncontrollably earthward.

Only by occupying stupid amounts of hard drive space can delays be avoided, while the high resolution options are outside the reach of anybody packing less than 166MHz under the bonnet. And as for those multi-player games, forget it. An extra mission disc is promised bearing the very things, but frankly that's not quite good enough. And neither is the way the ground texturing drops off way before the horizon (particularly noticeable at high altitudes), without any option to modify it to suit processor speed.

So *Jet Fighter III* isn't quite the devil-may-care beast of perfection that might have been hoped for. But nine out of ten isn't so bad, and it's still enough to elevate it past the hardcore *EF2000*, the arcade-friendly *F22 Lightning*, and any other contenders for the supremacy of the jet fighting skies. There's little or nothing here that hasn't been seen before, but *Jetfighter III*'s strength is that it manages to take the best of all the other combat sims and stuff them all into one hyper-intense, hugely atmospheric whole. It's just so toe-curlingly good to play, balancing the fast action with the piloting minutiae to perfection. Which is about as much as anybody could've hoped for, while conveniently leaving just enough for room for further refinement of the genre. Until then, *JFIII* will more than do the trick. (MR)

COMING TO AN AIR BASE NEAR YOU

Jet Fighter III may be about as good as it gets, but whether it can hold on to its newly gained crown is another matter. *DID* will be weighing in with the ultra realistic TFX3-F22 this summer. By which time *Digital Integration* will have an *F16* simulation up and running, and *Eidos* will be showing out with *Confirmed Kill* and *Flying Nightmares 2*. And then there's *MiG Alley* from Rowan, more *Jet Fighter* mission discs, and maybe even a *Jet Fighter IV* by this time next year. But don't hold your breath for that last one. *JFIII* only just got here.

DEVELOPER
Mission Studios
PUBLISHER
Eidos
CONTACT
0181 780 2222
PRICE
£45
MINIMUM SYSTEM
P75, 8Mb RAM, 30Mb
hard disk space, SVGA,
supports Win95,
double speed CD drive

PC REVIEW VERDICT

A near perfect distillation of every other classy combat flight sim. Outstanding.

9



DAYTONA USA

The lyrics for this game's title tune are "Daytona-aaaah, let's go away, let's go away...". How apt.

DEVELOPER
AM2
PUBLISHER
Sega
CONTACT
0181 995 3399
PRICE
£39.99
MINIMUM SYSTEM
Pentium 90, 8Mb RAM,
SVGA, CD drive, Win95

Dreadful version
of one of the
best coin-ops
around. Don't be
fooled by its
pedigree, this
one's a real dog.

3

PC REVIEW VERDICT

BORN IN THE USA?

Daytona USA was originally the work of Sega's renowned AM2 development team. Headed up by the legendary designer Yu Suzuki, AM2 has been behind the polygonisation of arcade games over the last few years. They were the first to introduce polygons to race games with Virtua Racing and beat-'em-ups with Virtua Fighter. Recent arcade hits include Daytona USA and Virtua Fighter 2. It was AM2 who designed the original coin-op Sega Rally – the PC conversion of which is looking super! So, buy our next issue for the playable demo and review.



A bit of bumper-to-bumper action from one of the two exterior views on offer in Daytona. Unlike many other racers, Daytona's four views are fairly democratic with no one view feeling any more playable than the others.

Sega's revolutionary Daytona coin-op debuted in the arcades around three years ago and it was a stunning advance on Sega's previous benchmark driving game, Virtua Racing. Daytona layered textures over the basic polygons that were Virtua Racing's unique selling point and ditched Grand Prix in favour of more spectacular saloon car jaunts. More familiar features that helped give the arcade machine such pulling power were the multiplayer races – some arcades hooked-up a staggering eight machines – and multiple, selectable camera views. Yep, there's no doubt that Daytona USA was a smash hit coin-op.

So, what of this conversion? Well, so far, all of the Sega PC games have been fairly faithful translations of the Mega Drive or Saturn originals. Thus, Virtua Fighter was a standout beat-'em-up, Sonic was a dazzling, if less-than-challenging platformer and Bug was a disappointing pseudo-3D effort at a next-gen platformer. The good news is Daytona USA seems to be a fairly accurate copy of the Saturn conversion of the coin-op.

The bad news is, Saturn Daytona was one of the worst conversions Sega has ever done.

Okay, that's not strictly true. PC Daytona is one of the worst conversions Sega have ever done, as the problems which dogged the Saturn version – poor polygon clipping and folding, murky, messy graphics and lethargic controls – are only amplified on the PC. You see, the trouble is, what works fine

on a custom coin-op board just doesn't port over to the PC without a great deal of effort.

Driving around, it's almost heartbreaking to remember just how good the coin-op was compared to this travesty. The memorable vistas of the coin-op – the suspension bridge, the wind farm, the roller-coaster landscape – look

pretty shoddy in VGA, too antiseptic in SVGA. All but the best PCs will struggle to reach an adequate frame rate making everything irritatingly jerky. Further compounding the game's ugliness, huge chunks of background are drawn in as you're driving, totally ruining the look of it.

And there's another serious problem that Sega has ignored – the higher expecta-



Mechanics will leap into action to replace your tyres in the pits. It won't help though.



Sega's racer may seem dated but features like the over-the-bonnet view and this road cut out of a mountain appeared here first.



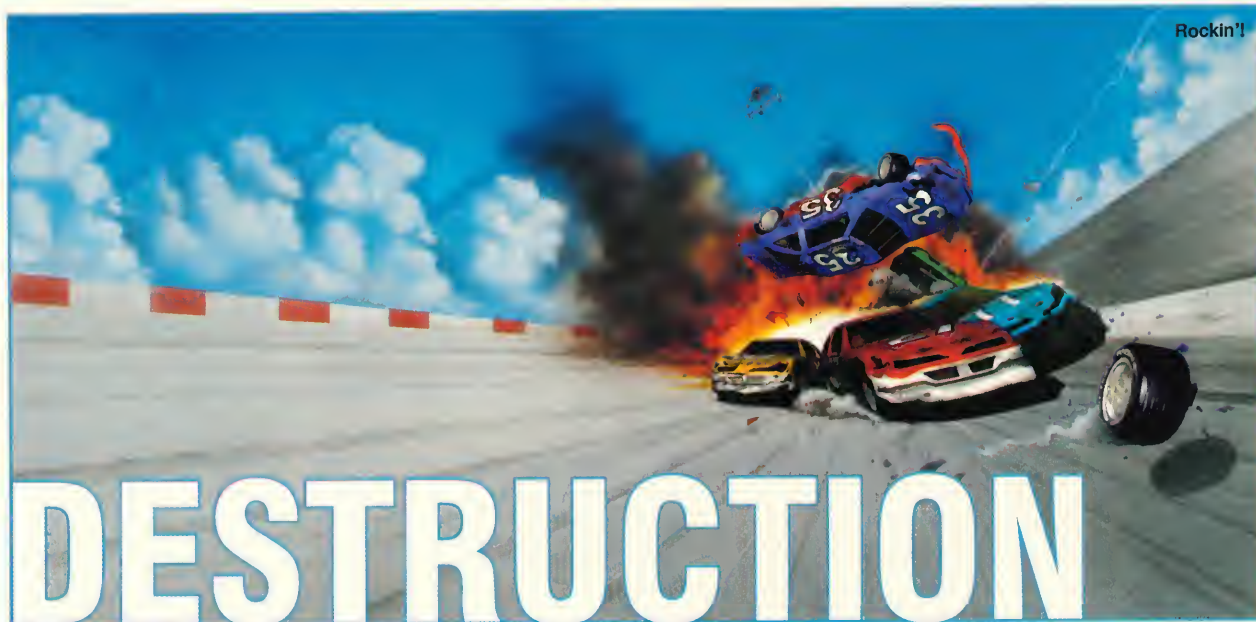
Daytona USA is faithful to the coin-op in its choice of three tracks – a beginner's oval, a standard coastal route and a city.

tions of the PC gamesplayer. Racing games on the PC typically come complete with a plethora of options – race seasons, upgradeable cars and a large number of circuits, for starters – which greatly extend the lifespan of a title. PC Daytona offers a few, tweakable features but nothing that changes the game in any meaningful way, and still only has the three basic tracks.

Without this, all the player has to get their teeth into is the quality of the driving experience which, discounting the poor graphics, is less than perfect. The driving model in Daytona doesn't get anywhere near the lively dynamism of the two Screamer games or even EA's over-rated The Need For Speed. The cars lack that crucial feeling of actually being on the road, of fighting for grip as you push things to the limit. PC Daytona simply feels like a bad old video game, something the arcade machine could never be accused of.

Even the coin-op's bells and whistles, the attract mode and the uniquely Japanese soundtrack have been poorly executed. Most of the sound effects are tinny and the music is far too quiet – Daytona couldn't feel less like a ballsy racer if it tried. A lazy conversion of an already flawed translation of the original coin-op, Sega has done itself no favours with this. (CB)

Driving around, it's almost heartbreaking to remember just how good the coin-op was compared to this travesty.



Rockin'!

PIT STOPS?

A surprising new feature in *Destruction Derby 2* are the pits stops. Pull in off the track in either a 'Wreckin' race or a 'Stock Car' race and you get some running repairs to your motor. You can only stop in the pits for five seconds at a time and there's only a limited amount of damage you fix in that time. You can control the repairs by 'pumping' damage out of the six areas of the car using the damage-o-meter in the corner of the screen.

DERBY 2

Does the follow up to *Destruction Derby* set the record straight or send it spinning into the air and landing in a crumpled heap?

The first *Destruction Derby* was one of those games that, when you were told the idea, you just couldn't wait to have a go at. And if you had a go, you'd have been blown away by its stupendous crashes, its billowing oil and steam trails and vicarious thrill of wanton destruction. It was fun. But it was all cosmetic. If you carried on playing for more than a couple of goes, you'd discover that... there wasn't much more to discover.

Fair play to the

firm, Psynopsis has admitted as much. Oh, not at the time, naturally, but all the bumf accompanying this sequel explains just what they wanted to put right and how much better *DD2* is.

And it's good that they've told us this, because you'd be hard pushed to guess it from playing *Destruction Derby 2*. Oh, sure, there's a lot that's different here from the first game but the ultimate goal of a playable, action-packed race game still seems a long way off. The tracks have changed for the better with the original's rather weedy banner-borders and pretty backgrounds replaced by some much more impressive circuits that, unusually, take advantage of the possibilities of 3D modelling.

There are banked corners, hills, humps, ramps – paired for take-off and landing – and, best of all, twist jumps which spin and flip your car through the air making you feel like a stunt man in *The A-Team*. Now, the tracks may be more complex and more varied but the racing is really no better. The main problem is the car and its handling. True, *DD2* does have suspension modelling for each wheel but it doesn't make a blind bit

of difference to the soapy, lightweight feel of the cars. Cornering is a nightmare as the cars swing around in their own time and then suddenly lose it, the back end kicking out and the car spinning off into the barrier.

Apparently, the motors can now take a lot more damage than in *DD1* but that doesn't help. The other racers seem to gang up on you, getting in a couple of hits to disorientate to you, then following up with a few more smashes to blow

your radiator. The fact that cars now flip into the air and roll down the track as well as spinning only make things worse. These new crash effects also ruin what was the best bit in *DD1* – the destruction derbies which take place in gladiator-style arenas.

These 'last one alive wins' free-for-alls were terrific fun, ideally suited to the game's mechanics and the only thing that keeps you playing. In *DD2*, it's hard to survive more than a few seconds in the destruction derbies as, before you know it, the other

cars have hit you, flipped you and totalled your car. Again.

Despite trying to do all the right things to improve upon the flawed delights of *DD1*, developers Reflections has only succeeded in giving us more of the same. The irony is, this ground-up conversion has retained very little of the original code but still falls down for the self same reasons – it's too hard to drive, there's too much destruction and still not enough racing. (CB)



The 3D impact dynamics mean cars don't just spin around on the ground when hit. They fly high up into the air.



Like *Screamer* and its sequel, the cars in *DD2* have four-wheel independent suspension giving them a more realistic look.



In two of the game's three playing modes, you score points for spinning or wrecking other cars – double if they're in the lead.

PC REVIEW VERDICT

Flawed follow-up to a flawed original which even lacks the vital visual clout of its console cousin.

5

DEVELOPER

Reflections

PUBLISHER

Psynopsis

CONTACT

0151 282 3000

PRICE

£49.99

MINIMUM SYSTEM

P60, 8Mb RAM, double speed CD drive, SVGA, DOS or Win95



HERE BE DRAGONS (AND DUNGEONS)

Not content with transforming *Advanced Dungeons and Dragons* Forgotten Realms scenario into a wargame, Interplay has more fantasy-based goodies in the pipeline. First up there's *Dragon Dice*, based on the strange AD&D offshoot. Imagine *Magic: The Gathering* meets *Risk* using 112 dice, and you've got a rough idea what this one's all about. And then there's the real-time 3D jaunt, *Descent To Undermountain*. The developers are currently adding an SVGA mode to this *Ultima Underworld*-ish escapade, which uses *Descent*'s 3D system to depict all manner of polygon-generated beasts. See our preview on page 48.



Based on the the Forgotten Realms scenarios from the *Advanced Dungeons and Dragons* role-playing game, *Blood and Magic* is surprisingly different from any other action strategy game.



The familiar presentation style masks a great gameplay system unlike any other.



Later levels and campaigns present more awkward landscapes. Here airborne creatures are a must.

BLOOD AND MAGIC

Interplay's *Dungeons 'n' Dragons* assault kicks off with a wargame that doesn't play like *Warcraft* or *C&C*. Whatever next?

It's heartening that the press blurb for *Blood and Magic* boasts of "each character having 14 frames of unique animation — prepare for a visual feast". Such children's TV presenter enthusiasm and innocence even pervades the voice-over used in the tutorial sections. It's an approach that recalls *Dungeons and Dragons*, the cartoon series, rather than the complex role-playing experience. Not quite the *right* approach, then.

Except, the laughably bad graphics and overly chummy presentation are actually wrapped around a highly individual arcade wargame. Yes, *Blood and Magic* is a game in the *Dune/Command and Conquer/Warcraft/Warwind* mould. But that doesn't mean it doesn't have a unique flavour. It's not a fast action, visually arresting, instantly appealing flavour, mind you. But it's an

individual one, all the same. And it's one that just gets better and better.

A fantasy role-playing game, *Blood and Magic* is firmly in the land of the fairies. But while *Warcraft* balanced combat with an empire-building system based on collecting of vital raw materials, here magic (or mana) is the raw material for everything. Using a magical focus called a bloodstone, mana is accrued, which can be used to generate a golem. The golem then either remains dormant, building its own mana store to be transferred to the bloodstone's central cache (to create more golems), or can be transformed again into something more useful.

The transformation of the golems is initially a little tricky to grasp, but the basic gist is the ability to join four of the blighters together around foundation stones to make

a building. These buildings are dedicated to the creation of wild creatures, fighters, undead, magic-wielding persons, or clerics.

The catch is, these units are created using that all-important mana from the central bloodstone to transform a nearby golem. Oh, and battle experience is required to research every new unit type before it can be used. Some levels offer ready-made buildings, but there's still a lot of mana juggling to be done, working out whether to channel the stuff into golems (to speed up the collection of mana itself) or use it to create fighting units. Bung in a variety of levels along with the impressive array of creature types and you've got a bizarre, but hugely enjoyable game formula.

The problem of the nasty graphics remains, however. And a non-modifiable sluggish pace does little to enliven the game to the casual player. Even the intro sequence is an exercise in laziness. Worse still, the intelligence routines on individual units aren't impressive. All elements that prevent *Blood and Magic* from seriously threatening *Warcraft 2*'s position as best RPG-based wargame. Yet that wonderfully structured game system still shines through. Somewhere beneath the over-familiar point and click approach is a rule system utterly different but just as compulsive as the ones that power the titans of the action strategy game world. You've just got to dig a little deeper to find it, that's all. (MR)

DEVELOPER

Interplay

PUBLISHER

Interplay

CONTACT

01628 423666

PRICE

£39.99

MINIMUM SYSTEM

486/33, 8Mb RAM, double-speed CD drive, Windows 95 and modem/serial link supported, soundcard

Looks like a joke, but is one seriously involving and different strategy wargame.

PC REVIEW VERDICT

OUR HOUSE

Bring four golems together around a foundation stone for a bit of magical building work.



A warrior stands guard, while four golems approach the stone. Notice how inactive golems revert to their blue pyramid form.



Select the transform option and simply decide which building to create, and let the magic do the rest.





SONIC THE HEDGEHOG

Sega's star player spins onto the PC, but is it too late?



Battling with Dr Robotnik in the conversion of the legendary Mega Drive platformer. It's nothing if not a faithful conversion.

Blast your mind back to the good old days, when PCs could just about handle displaying green text on a black background, when *Blind Date* still seemed like a good idea, and when funny little consoles could be found in every teenager's bedroom. That was the golden age for Sega, when one single game idea made them a fortune and changed the face of video gaming. Sure, *Sonic The Hedgehog* may look like just another animal fronted platform game. But back then its speed,



The most memorable image from the days of Mega Drive gaming brought to life on Windows 95. But will anybody really want it?

complex landscapes, and dayglo graphics were what other games programmers aspired to.

Things have changed a lot since then, however. *Virtua Fighter*, *Daytona* and their like are the Sega games of the new generation. A two dimensional platform game with blocky graphics and nothing to do but run, jump and spin can't help but be yesterday's news. Even one as legendary as *Sonic*.

Which is a shame, really, because there are some lovely design elements to *Sonic*,



Mix lots of acceleration movement, ring collection and extremely fast scrolling action and you have a console classic.

and nobody does this silky smooth arcade game stuff better than Sega. It's just that they've done it several years too late with PC conversion. Retro freaks will love it, of course. And there's still a strange attraction here, which makes those outdated visuals and undemanding game structure almost forgivable. But faced with this winter's full blown contenders like *Quake*, *Virtua Fighter* and *Tomb Raider*, *Sonic* is beginning to look as flat as one of those dead hedgehogs lying by the roadside. **(MR)**

DEVELOPER

Sega

PUBLISHER

Sega

CONTACT

0181 995 3399

PRICE

£29.95

MINIMUM SYSTEM

Pentium 75, 8Mb RAM, 1Mb hard disk space, double speed CD drive, Windows 95, joystick compatible

PC REVIEW VERDICT

Some of the old magic is here, but it's no longer the year of the hedgehog.

6

BUG!

The platform game gets another dimension with Sega's new insect offering...



The bad guys range from the this purple insect, to dung beetles, grasshoppers and far more sinister creepy crawlies. Shame they all move in the same way.

On paper *Bug!* just has to be a winner. It's a platform game from Sega, for a start, and nobody does platform games quite like Sega, particularly ones chock full with power-ups, jumping attack moves and cunning level layouts – all of which *Bug!* has. And then there's that 3D aspect to the game. This is a platformer with movement in and out of the screen as well as the usual four basic directions. All promising stuff, you have to agree.

Even the fact that our Buggy friend doesn't have quite the same charisma or spriteliness doesn't matter that much. What does make quite a difference, however, is the general pace of the game. Wandering around the 3D *Lemmings*-style viewpoint (except this is a fixed perspective, of course) levels, attacking or avoiding the nasty bugs on the way to the exit, is a far too leisurely affair. Plus, a combination of misjudged difficulty settings and an awkward way of jumping to attack the other bugs makes progress through the 18 levels very frustrating. Compared to the now classic Mega Drive version of *Sonic the Hedgehog*, *Bug!* on the PC is laborious and plodding. Particularly so given the over-large level designs and relatively small number of restart points.

Bug! is neat to watch, but actually interacting with its limited three dimensional world simply isn't a rewarding experience. 3D platforming could well be the way forward, but *Bug!* isn't even a point along that road to the future. You'd be forgiven, in fact, for mistaking this insect for a certain slow moving carapaced reptile. Roll on a PC conversion of *Nights*. **(MR)**



Regular platform game jumping and attacking action in *Bug!* The difference is that here our hero can walk in and out of the screen.

DEVELOPER

Sega

PUBLISHER

Sega

CONTACT

0181 995 3399

PRICE

£39.95

MINIMUM SYSTEM

Pentium 75, 8Mb RAM, 8Mb hard disk space, double speed CD drive, Windows 95, joystick compatible

PC REVIEW VERDICT

Clever and all that, but not exactly bursting with excitement.

5



Being a Windows 95 title, *Bug* operates in a variety of resolutions or in a scaleable window. Choosing anything but the lowest resolution makes it, er, crawl on anything less than a Pentium166, though.

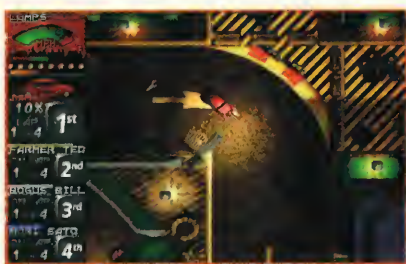


DON'T LOOK BACK IN ANGER

Death Rally is clearly inspired by the likes of Atari's ground-breaking *Sprint* and *Super Sprint* arcade machines which first brought multi-player, top-down circuit racing to the fore. Even more directly related are the *Supercars* games, designed by Gremlin for the Amiga which, even then, were slick but dated. Yes, *Death Rally* is fun. Yes, it's more amusing than half a dozen po-faced "interactive entertainments", but do you really want to fork out twenty quid on a trip down memory lane?



Cornering isn't tough in a Formula One Grand Prix 2 sense but you'll need get the racing line right to beat higher-rated opponents.



Progress means tougher races, tougher circuits, tighter bends, difficult complexes and more chance of damaging your motor.



The main feature that gives *Death Rally* its staying power are the upgrades, weapons and new cars that you purchase from your race earnings.

DEATH RALLY

There are old racing games and bold racing games but very few old, bold racing games.

This is an old game. You won't find anything in *Death Rally* that wasn't around at least ten years ago. And what's here isn't done in any kind of innovative way. It's a top-down, scrolling racing game with a standard mixture of tracks and car upgrades. It's no surprise that such a game should emerge from Apogee, long-time champions of the world of shareware – surely the natural home for such basic fare. What is surprising is that *Death Rally* manages to keep you at the PC far longer than most modern 3D extravaganzas.

The game can be played in one of two ways. First, there's a straight racing mode which lets you buy new cars and upgrade tyres, armour and engines on each car. Then, there's an all-in racing mode that lets you kit your car out with machine guns, mine droppers, rocket fuel and spiked bumpers – it also throws in some dodgier elements

such as the option to hire someone to sabotage an opponent, borrow from a loan shark and even run drugs. (Although running drugs around a race circuit doesn't make a lot of sense).

Both modes work through a basic championship with twenty drivers, including you. Races take place in three categories – easy, medium and hard – and you're barred from entering the higher categories until you've upgraded to a better car. Four cars take part in each race and you sign up for any of the three races on one main screen. The signing up is done in real time, a neat feature allowing you to see who's in a race before joining – but linger too long over your decision and the 12 slots will be filled and you'll miss out.

The races themselves are highly entertaining. The simplest of controls make it a very easy game to pick up and the different categories of race – and the three difficulty

levels *Death Rally* has – make it instantly accessible. In-race bonuses resupply weapons and turbos, repair the car and there's money to collect too. But the bare essentials of the racing are what it's all about and the short races last enough for you to stand a chance even if you make a couple of errors but not so long that tedium sets in.

So, if it's that good what's the problem? It's that age thing, you see. *Death Rally* may be a masterclass in mid-eighties arcade game mechanics but it's a class nobody is interested in. Which is a real shame. The simple, well-tuned gameplay shines through the dull presentation but it's far too familiar territory for veteran gamers and unlikely to appeal to anyone raised on Pentium power. Even at its relatively low price it's hard to see *Death Rally* appealing to anyone but the more nostalgic of retro gamers. Basically, it's a bit too 1986 for 1996. (CB)

DOWNLOAD

You'll find a playable demo of *Death Rally* at GTi's Web site at <http://gtiinteractive.com>

PUBLISHER
GT Interactive
DEVELOPER
Apogee/Remedy
CONTACT
0171 258 3791
PRICE
£19.99
MINIMUM SYSTEM
486 DX2/66, CD-ROMx2, VGA, 8 Mb RAM, MS-DOS 5.0

The eighties revisited. Well-designed, well-programmed, but still an old-fashioned arcade game.

PC REVIEW VERDICT

6



Despite its fundamentally ancient gameplay, *Death Rally* uses polygons in the background designs to give a feeling of depth and solidity.

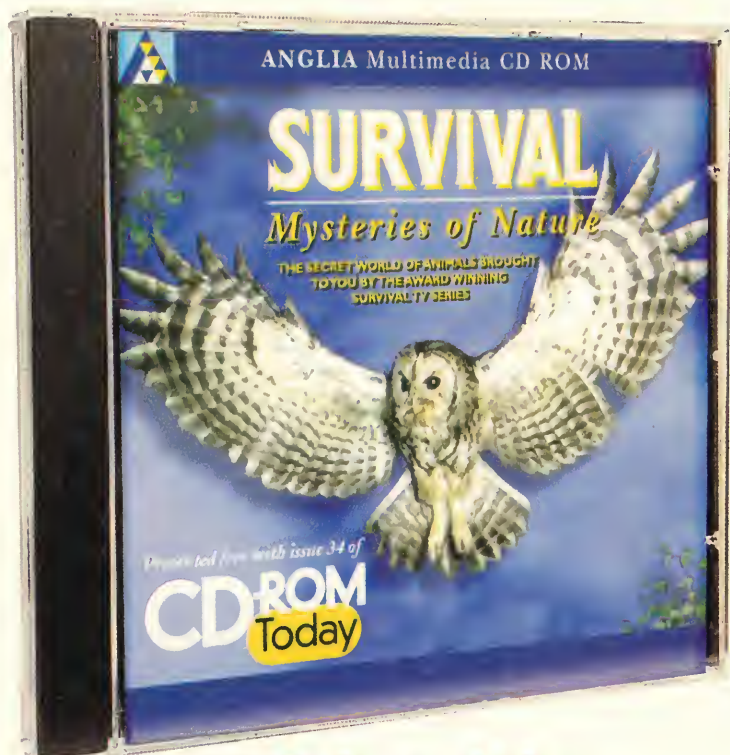


Switch on the weapons options and you'll get to kit your car out with forward-firing machine guns, front spikes and a mine dropper.



Drive over a slightly dodgy package and it'll go to your head – and the screen will break up in a shimmer of waves.

CD-ROM Today



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January issue on sale from 19th December

AlfaTwin

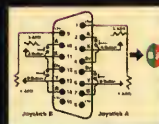
The ONLY automatic joystick selector you'll ever need

PC FORMAT
GOLD

PC FORMAT MAGAZINE
SEPTEMBER 1996 ISSUE



Patent Pending



Although most PCs have only one game port the design actually supports two joysticks (A & B). Advanced sticks that sport four buttons, throttle and rudder controls or coolie cops, make use of the second joystick (B) controls. When two sticks are connected only two fire buttons per stick are available.



In two player mode, both joysticks can be activated at the same time for two-player games. However, due to the design of the IBM joystick port, the advanced functions of the joysticks are not supported.



Select single player mode and the AlfaTwin allows you to switch between two joysticks. In this mode, all the functions of the stick are supported. To select your stick, simply press the fire button of the controller you wish to use.



You can coscode up to three AlfaTwins together. This allows four different joysticks to be connected simultaneously. Moreover, the six foot long cable brings the AlfaTwin round to the front of your desk, freeing you from the hassle of plugging/unplugging your joystick from the back of the computer.



AlfaCommander Pro



AlfaPilot Plus

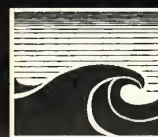
Leading joystick manufacturer says:

"Just to let you know that the AlfaTwin joystick-switch arrived intact. At this moment I have connected 7 (1) joysticks to the AlfaTwin :-)) and it works perfectly."

Computer --- AlfaTwin --- Gravis Phoenix
Gravis G1P
Gravis GamePods

"This all works without having to pull out all the cables, simply wonderful! I cannot say anything else except congratulations with a very nice product."

Edo Diskem, Technical Support Specialist (Gravis Europe/Holland)



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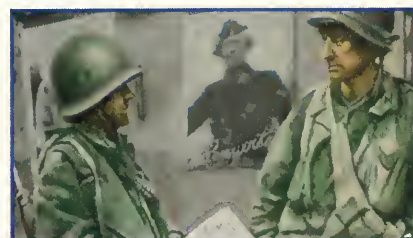


REISSUES

If you're looking for shoddy interactive movies then you've come to the wrong pages. But if you're after bargains...

1944: Across the Rhine

Unlike most tank sims, *Across the Rhine* puts maps and manoeuvres before chunky 3D tanks. Initially, it's daunting. The manual has more clauses than the treaty of Versailles; you soon feel crushed by the sheer weight of information. Persevere though, and you'll realise *Across the Rhine* is one of the best wargames on the PC. Unlike most of them, there isn't a dreary hex map in site. Instead this game is beautifully presented (the 3D tank representations are lovely, if not entirely vital) and endlessly playable. Get stuck into it, and you'll find its months before you can extricate yourself from its intrigues. Just like war, really. Unless you die, of course.

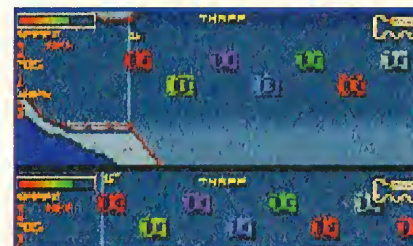


"So, exactly how are we going to get those tanks across the Rhine?"

PowerPlus • £13 • 01454 893893

SuperCars International

A fun little top-down racing romp. *SuperCars International* lets you relive the wacky races of your childhood, when only a ginger cat stood between your Matchbox Corvette and the back door. It even has a split-screen mode, a woefully under-used ruse enabling two drivers to drive on the same screen at once. Racing each other, even. (What's the point of competing across the Internet? Where's the drama, the passion and the sheer danger of being thumped in that?) Brainless fare, *SuperCars International* does eventually run out of fuel, but like a Citroen 2CV it's a chuckle while it lasts.



Why these super cars are International remains a mystery.

Hit Squad • £10 • 0161 8326633

Budget Game of the Month Transport Tycoon

One day, every *Sim City* in the world will be linked with *Transport Tycoon's* road and rail networks. Starting with just a few thousand pounds, you build up a transport empire encompassing trains, planes, automobiles and boats. Cleverly, your actions have a visible effect on the world. Connect two cities and they'll swell in size. Link a town to a mining complex and it'll grow richer, faster. There are flaws – trucks aren't worth bothering with and you can dominate the whole world yet be unable to buy out the opposition. Still, with a new vehicle lurking around every corner, it'll be while before you can put it down. Buy it.



Kick off your shoes and forget your blues with Microprose's classic *Transport Tycoon*.

PowerPlus • £13 • 01454 893893

Micro Machines 2 Special Edition

Top-down racing doesn't come better than this, at least not on the PC. *Micro Machines 2* enables you to race cars based on the real Micro Machines collectable toys around everyday household environments – bedroom floors, kitchens and bathtubs – without jeopardising the stripped wooden floorboards. While it's fun to play alone, the game really kicks off in multi-player mode. And, if it takes your fancy, there's a track designer as well.



Micro Machines 2. You know the drill, so swerve when you see it.

Codemasters • £12.99 • 01926 814132

Ubisoft Golden Collection 1

A reasonable collection of ten oldies. *Formula One Grand Prix* was once the best racing sims, *Civilization* is beaten only by its sequel, and *Air Power* is an enjoyable 3D air combat game. Having thrown its best punches, the Ubisoft collection now stumbles to its knees. *Thunderscape* is average, *Panzer General II* is the Ford Escort of tank sims and *Master of Magic* doesn't really dazzle these days. *Zeppelin* and the other few, are more like self-inflicted blows than anything else.



Sepia-tones, yes, but there's no nostalgia with this Hindenburg-like *Zeppelin*.

Ubisoft • £49.95 • 0181 944 9000

New Budget Label Launched

Another month, another new budget label. NovaLogic, creator of the infamous Voxel Space graphics engine, has just launched *The Master Series*. Unsurprisingly the first titles – *Werewolf*, *Armoured Fist* and *WolfPack* – are all military sims, and we review each one in turn this month. (see below)

Meanwhile, back at NovaLogic's London headquarters the mood is optimistic for the new range. "The *Masters* range provides top quality military simulations at affordable prices," says Mark Scriven, NovaLogic Vice President. "Issuing classics at a budget price allows a broader range of people to experience the excitement of these explosive titles."

Originally, *The Master Series* was to be called the *Military Master Series*. NovaLogic, however, has plans to include in the range games which don't have military themes.

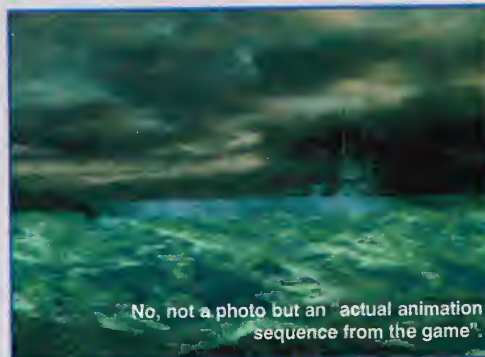


Only budget games from NovaLogic get a medal like this.

Call NovaLogic for further details • 0171 4051777

Wolfpack

Like some old madame from the Rue St Denis, *WolfPack* arrives dressed up but can't hide its age. *WolfPack* is so old, no-one here remembers playing it – and we thought we'd played everything. The first date we see on loading is 1990. The second is 1993, the year *WolfPack* received its CD workover. "Actual animation sequence," screams the box, and there's a flat cartoon image of a battleship as proof. "CD images in your face," it brags, and your eight-speed drive blinks every few seconds to prove it. "Multi-player mode," followed by, "(1-2 players)". All this would be good natured banter if *WolfPack* was a classic game that had won its scars in battle. It's not.



Novalogic • £12.99 • 0171 405 1777

Werewolf KA-50

About 18 months ago, US Gold (now called Eidos) released a helicopter combat game called *Commanche versus Werewolf*. It wowed everyone with its special Voxel Space graphics system. Intriguingly, it came on two CDs and enabled you to fly multi-player, with either with the yanks in their *Commanches* or the Russians in their *Werewolves*. It made for some great head-on, two-player, Cold War action. Now, in yet another innovative flurry, the package has been carved in two, with Novalogic keeping the *Werewolf* half. It's still a great game but, obviously, you can't fly around in the *Commanche* anymore.



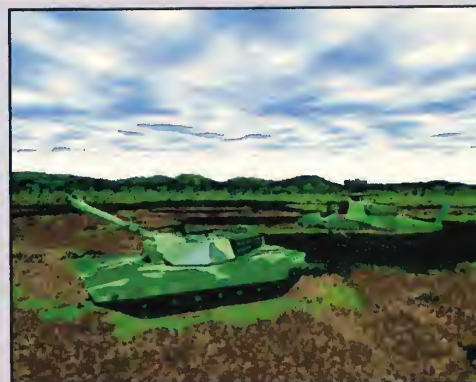
Doesn't the Werewolf helicopter look uncannily like Disney's daft dog Pluto?

Novalogic • £12.99 • 0171 405 1777

Armoured Fist

War is often tarted up for PC gaming fans and *Armoured Fist* is one of the prettiest renderings of war we've come across. Its animated sequences were simply unbeatable in its day, giving no indication of the true horrors of war but looking as smashing as an A-10 shell nonetheless. In-game, things look lovely too. *Armoured Fist* was Nova Logic's first attempt at Voxel Space graphics, and the results are convincing. Sadly, all that glimmers is not a sleek, trundling metal box of death. Your tank is tricky to control, and the gameplay can get repetitive.

Still, its brilliant terrain editor let's you get creative with the trench digging and tree planting, and *Armoured Fist* will reward the faithful commander with a long, noisy campaign.



Novalogic's Voxel Space 3D system hasn't really taken off like some of us expected.

Novalogic • £12.99 • 0171 405 1777

RETRO PERSPECTIVE

Peter Williamson heads up Supersonic Software, the developers of *Micro Machines 2*. We ask him if he would still take the game to a party?



Peter Williamson on *Micro Machines 2*

Are you proud of *Micro Machines 2*?

I've got to say yes! After the Mega Drive, the PC version was a whole new challenge. On almost any PC it runs at 60 frames per second – essential for the arcade gaming experience and still rare today. Also, *Micro Machines 2* is one of the few genuine multi-player PC games.

But did *Micro Machines 2* change PC games forever?

I can't really say yes – games like *Micro Machines 2* have yet to make their mark on the PC. At the moment, any multi-player capabilities concern network gaming. I strongly believe that simultaneous multi-player gaming is an essential way forward – the more people you have around one machine all shouting at and taunting each other, the better.

Would you do it differently today?

I'd make far more of the one player game. We concentrated on the multi-player elements, and ended up with a brilliant multi-player game but merely a good solo one. Also, doing it again I'd make everything 3D and for the Pentium only, with lots of clever 3D camera work. I'd also spend more time on the Construction Kit. It's amazing what some people produced with the very limited construction options we included, so I'd give them much more flexibility and a more powerful editor. Then they could really produce some superb tracks.

What are you working on now?

We've just started our latest multi-player racing game will be quite a radical departure, since we're blending in the non-racing gameplay of beat-'em-ups and exploration into the mix. We've also come a long way with our 3D technology and our new graphics engine should be up there with the best. Even after three years of multi-player racing game development, it's still a great challenge.



KNOW A GOOD TIP OR TWO? SHARE IT WITH THE WORLD AND BE THE SAVIOUR OF MILLIONS – BY WRITING TO US AT PC REVIEW, FUTURE PUBLISHING, 30 MONMOUTH STREET, BATH BA2 2BW. OR E-MAIL US AT PCREVIEW@FUTURENET.CO.UK.

PLAY TO WIN

Christmas has been and gone and now you're looking for all the latest tips for all the latest games. Well we've got just the ticket! Satisfied?

CivNet

Stop press. New cheats for *CivNet* have just hovered into view, by golly. Prepare to pull up alongside. Ahoy there!

To activate the cheats below type [Ctrl] A O D B A M F in that sequence at the end of a turn. A menu will appear that accepts the following cheat codes. Just type them in and get ready to win. Your opponents will hate you. Unless they're stupid.

ScaleIt: Increases your production

ArmyInfo: See information about the other races

MoneyAndPower: Supplements money and power

AllSeeingEye: Reveals the entire map

GetRichQuick: Awards free money

GetSmartQuick: Increases settler intelligence

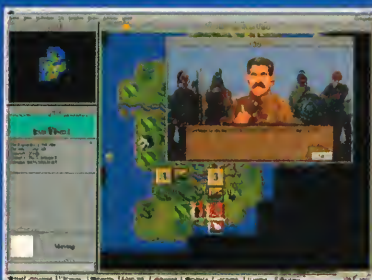
MissileCrisis: Allows the production of nuclear missiles

SettlersHol: Creates settlers

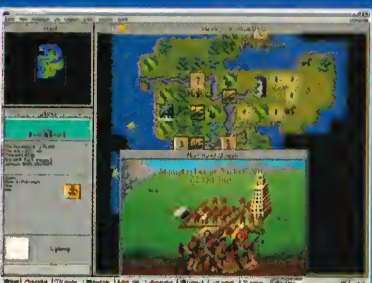
Nukestorms: Causes global warming

Automode: The computer plays your turn

Armageddon: Nukes the whole world!



Stalin, my old mate. How's things? The missus? The 'tache?



Oh no, civil disorder! The men have dressed as ladies and are storming the winter garden! Help!



Screamer 2



Hurtle down cobbled streets very very quickly in *Screamer 2*. Oh, and mind the mountain.

Oh, it was bound to happen really, wasn't it? *Screamer* had codes in it so why shouldn't its sequel have the same cheat options as well? Give us one good reason why not? See. You can't. Besides these codes allow you to get at the bonus track, all the hidden cars and all the championship modes.

All you need to do to activate the cheat modes is type in these codes at the start-up screen. So where would you be without good old PC REVIEW, eh? Still

in the slow lane? We think you'll find these cheats turn *Screamer 2* into a whole new game.

MRTRK

Gives access to all the tracks

TACAR

Awards the first secret car

TBCAR

Awards the second secret car

TOCAR

Awards the third secret car

TDCAR

Awards the, um, fourth secret car

CHRNPA

Play in all five championship modes

Deadlock

Want more Civ-style goings on, do you? Well get a load of *Deadlock* and it's many cheats below.

To get your hands on them, first you must hit [CTRL] with [F1] to enable the cheat window. Now all you need to do is type them in just so.

MAKE IT SO: Gives you 1000 credits and increases resources in that territory by 100 units. Large!

FRODO: Completes current research project instantly.

GOHTI: Maxes out the population in the selected territory.

TOUCHE: View any of the end cut-scenes.



Surely those blokes are too big to fit inside the buildings.



Commander! Good to see you.

Okay Hat Bloke, cut the smarmy stuff. Let's get down to business.



Ripper

Besides having to do an inordinate amount of aimless wandering in this gorey and grisly adventure, you're going to have to solve some darned tricky puzzles too. Not any more.

All you need do is type these in during the puzzle or action sequence to skip through them. It really is that easy.

Catherine's Well ICE: **ARCADE**



Sorry Sir. This is a Peter Cushing lookalike convention. You're nose simply isn't pointy enough.

Falconetti's Shooting Gallery: **ARCADE**
Catherine's Brain ICE: **CAFFEINE**
Web Runner's Archive Sliding Puzzle: **ZZTOP**
Falconetti's Secret Well Puzzle: **HEADACHE**
Pegasus Well Chess Game: **ASPIRIN**
Orestes Well ICE: **ARCADE**
Odysseus Well ICE: **ARCADE**
Falconetti Book Puzzle: **SPONGE**
Anti-Viral Well Puzzle: **PRETZEL**



Looks more than a little puzzling does it not? Well skip it instantly with a cheat code.

Settlers 2

Settlers 2 cheat for you now. Type in **THUNDER** during the game and you'll be able to build anything. Once you've entered the

code a tiny exclamation mark will be visible on screen. Once this has appeared press [Alt] and [F7] to view the map.

Mines, a town hall, a farm, a blacksmiths and most importantly, a pub. What more to life is there?



War Wind

War is something not to be trifled with. It is the epitome of man's inhumanity to man. It is the ultimate example of all things hideous and foul. And so, for that matter, is wind. So, why not grab

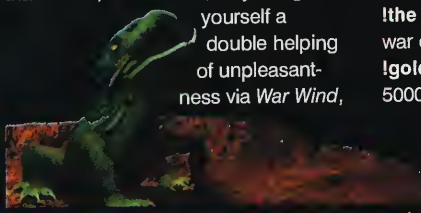
yourself a double helping of unpleasantness via War Wind,

aided in no small part by these two miserly cheats. First press [Enter], then type the codes below then hit enter again.

!the sun also rises: Turns the fog of war off.

!golden boy: Awards an additional 5000 units of resources.

Nice lizard. Good lizard. Easy. Aieeee! Damn thee, reptile!



Monster Truck Madness

It's madness on mega wheels! Typing in the following code allows you to race not in a monster truck but in a genuine monster! Argh! Just type in **TREX** during your game while both paused and in-

play and your truck will be transformed into a car-eating Tyrannosaur. While your at it why not hit [CTRL] and [3] to switch to a chase-plane view which shows off this fine specimen to best effect.



My God. What a Monster Truck.

You can't park there, mate.

How are the OAPs going to get in the minibus now?



Death Rally

Zip up your leather jacket and prepare for the fearsome *Death Rally*. Then unfairly give your weeny car the edge by typing in these codes during the race:

DRUB: No damage (invincible)

DREAD: Unlimited ammo

DRAW: Unlimited turbo

DRINK: Awards rocket fuel

DRUG: Causes a mushroom cloud

Or type these in while at the menu screen

DR00L: Get \$500,000

DRAW: Get \$1000

DROP: Drop 10 points

DRIVE: Get 10 points



Super charge your car to an even more ridiculous degree with these cheats.



"If Syndicate Wars is to be believed, the future owes a very large debt to Ridley Scott's Blade Runner." – PCR60, October 1996.

SYNDICATE WARS

Last month you conquered the world as a Eurocorp cyborg, now do the same for the Church of the New Epoch. God have mercy on your soul.



Fire at the longest range of your selected weapon. That way you won't get caught in the blast.



Part two

I say, are you alright? Even the police come under fire in Syndicate Wars.

1 Mission 1 TRIPOLI

Go north from the start point until you see a green dot on the map to your west. Go there, eliminate your target, return to the path and continue north. A road will appear to the east. Go up it until you come to a group of three Unguided. Kill them. Return to the path and continue to the end. Take out any Unguided you meet along the way, even those not marked for termination. This will save a lot of mopping up later. A quick shuffle to the west now and a small continuation north will bring a small group of three Unguided into range. You're trying to gain access to the now desolated church sector of the city. With this group terminated, there is only one more major force, lying due west. One of these punks has a Minigun. Pick it up and keep it. Now just scour the city, following the target beacons and eradicating the remaining stragglers.

2 Mission 2 SANTIAGO

Move east until you reach the edge of the road, then go south until you meet either the edge of the map or some Syndicate guards with Disrupters. Kill them and take their

Disrupters to sell later. Persuade as many of the civilians around the level as possible then return to the start and continue west until you reach a fenced-in police station. Sneak in and persuade all the police, being careful not to alert the other police. Return to the start point and perform a complete circuit of the outside of the city. Eventually you'll arrive at the IML that will transport you into the centre of the map where the target persuadee agent is. Don't take the more direct route because there are two, manned police trucks waiting to pounce. There are two groups of two Syndicate guards, one to the south-west and one to the east. The group to the south-west should be killed first as they react to the arrival of the Zealots. You should now be able to persuade the group to the east without them noticing until it's too late. Now move east and persuade two more Syndicate guards with LR Rifles standing by a downed bridge. Note that the target agent is in the vicinity and will run to the nearest flying car if he catches a whiff of the Zealots. Also, there is an armoured flying vehicle on the level with a couple of Syndicate guards inside, so you need to be sneaky to catch him without injury. Go east, around the back of the building that the last two persuadees

were next to, and board the vehicle. Select the persuadertron and hunt the Syndicate agent from the air, being very cautious about the other Syndicate guards in the area. Once the agent is persuaded, land, let the agent in and go to the evacuation point.

3 Mission 3 JOHANNESBURG

Equip the Zealots with Pulse Lasers, Miniguns and LR Rifles. Group them and run to the vault in the north-west corner of the map. Take out as many Syndicate guards as you can with the Rifles before switching to Miniguns or Lasers to finish them off. Now move to the bunker to the west of the main car park and wait for the money truck. Kill the Syndicate agent who emerges from the big armoured vehicle. Take the money from him, kill the remaining couple of guards who arrive with the convoy, then steal the big armoured vehicle and make a really fast dash for the IML station, through the approaching Syndicate guards. Your vehicle can handle quite a lot of abuse so. Once the vehicle arrives, disembark quickly, kill the three guards by the station and get out fast.

4 Mission 4 GENEVA

You complete this level with the help of Mirabelle Lucy De Saxo. Take her north-east to the edge of the enemy compound then sneak her round the inside of the fence to the south-east corner. Go along the south edge of the compound, looking out for Syndicate guards. Now creep up the west wall to the top of the map and wait for a guard who will appear just south-east of the position that De Saxo is now in. Kill the guard with the LR Rifle. Two more guards will



Short range explosions from scenery are ideal for taking out a group of baddies.



Vehicles are pretty stupid. Catch one on a crossing and you can stop it and destroy it.



react so take them out with the LR Rifle too. De Saxo should now approach the compound that holds the persuadee. Persuade him and make her escape the same way she came in. Be careful because there are now two slow moving targets for the guards to spot. Once clear of the compound De Saxo should run as quickly as the persuadee can to Father Black.

5 Mission 5 HONG KONG

Equip your agents with the following if you've got 'em: four Miniguns, four Pulse Lasers, four LR Rifles, four Medikits and two High Explosives. You'll start in an IML link with groups of Unguided just behind you. Group your Zealots and run as fast as you can to the north/north-east and find the entrance to the base you're trying to protect. Cross the river by the large road bridge. Drop one of the explosives on the bridge as you're crossing and continue to run onwards to the compound. Once inside, wait for the explosion. Next, un-group your Zealots and send the guy who holds the other explosive onto the footbridge to the east of the road bridge. Place the explosive here and destroy it too. Group your Zealots with their LR Rifles on the east side of the church and wait for the now feeble attack from the Unguided.

6 Mission 6 ROME

The main objective is to get into the Syndicate base to the north of the city and kill all the agents and guards. Get your weapons out because you'll find yourself under attack very quickly from a group of punks. Electron Maces or Miniguns are easiest. Next, move out of the station complex and you'll see more punks across the road. Shoot one to attract the others then retreat back to the station, picking them off. This may alert another group of punks around the houses to the east of the station. Kill them all. At the same time you'll be attacked by a Syndicate flying vehicle and a number of agents on foot armed with lasers. Kill them too. Once they're all out of the way there are two more groups of punks to sort out. The first lot are amongst a group of houses in the extreme west. Go in after them, looking out for ion mine traps. The final group is just to the north in a partially walled off area. After a short time an airstrike hits it - get out as soon as you hear it approaching. Then go in and finish off the punks and head into the base to take out the agents and guards. This base is surrounded by a wall, so steal the police car parked next to the police station, watching out for a group of punks trying to blow up the police

station. When you drive into the base, you'll be attacked immediately by the guards so kill them quickly. The car gives you extra protection, but make sure you get out before it's destroyed. After the guards are dead there's only the agents to take care of. Blowing up the buildings you're standing by is a good way of killing them, but save some explosive for that bank.

7 Mission 7 JOHANNESBURG

You have to assist some other Zealots in a base on the other side of the city. Beware of ambush by Syndicate agents on the way. When you get to the base, look out for an enemy scientist who has infiltrated it to blow it up. If the Zealots occupying the base are killed then it's mission over. The base will also come under attack from Syndicate agents. Once they're dead go back to the station, avoiding punks in vehicles. Syndicate agents have taken control of the station and will need to be taken out before you can complete the mission. Miniguns, lasers and LR Rifles are best.

8 Mission 8 SANTIAGO

This mission seems fairly easy, but it is quite hard to complete without losing any agents. You have to travel round the map to the temple buildings which Syndicate guards have infiltrated and take them all out. As soon as the mission starts, you are set upon by a large number of punks and agents. Kill the ones with LR Rifles first as they do the most damage. Miniguns are best. This onslaught of punks goes on throughout the entire mission and there is also a number of police both on foot and in the air. When you get to the temple area, kill all the guards but watch out - they're carrying explosives. Avoid the IFF units by the temple entrances. There should be no need to get near the temples but if you do KO gas will be triggered. If you survive that then it's back to the station.

9 Mission 9 TRIPOLI

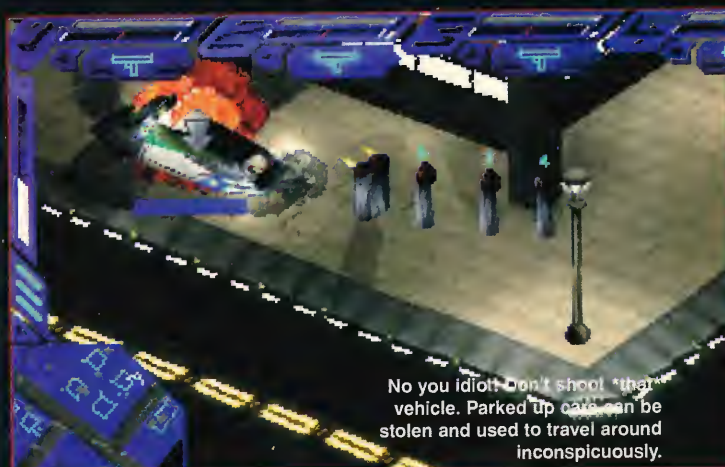
Equip your agents with LR rifles. Head north across the road then over the next road to the second objective. Wait here sniping the punks and keeping your eye on the scanner. Syndicate agents wearing clone shields will attack after about a minute. They're not difficult to kill until they put your clone shields back on. Start wasting civilians and head south to your next target. When both agents are dead run north and stand near the bank. Ambush the cop truck that comes to collect money and nick it. Meanwhile the Zealots are

returning to the gardens. Watch the scanner for grey dots because these are the other three assassin agents. Kill these to complete the mission.

10 Mission 10 SINGAPORE

Equip with LR rifles and KO gas. When you come out of the IML area turn left and take out the flying vehicle there. Fly around the city avoiding contact with the enemy and get to the other side of the bank. Watch the objective vehicle and see where it goes. There are two

locations protected by guards. Fly around sniping the guards when the vehicle has left. When they are dead, land and wait in ambush for the vehicle to return. Let the driver get out then shoot him. Follow the same procedure for the other defended area and when both drivers are dead get two agents in each vehicle and send them both to the rendezvous point simultaneously. When you drive past the bank the guards will attack you but will not be able to destroy the vehicles by the time you have driven past. Mission complete.





"Either Core has some insomniac level designer clicking and twitching his way through an equally impressive number of levels for the sequel, or it's banging its head on the table in disbelief, not quite believing it could have been so dumb as to give away so much in just one game." — PCR63, Christmas 1996.

TOMB RAIDER

Prepare yourself for the first part of our definitive Tomb Raider guide. Half now, half next month, okay?

Part One

1 LEVEL 1 — CAVES

Climb the rocks to your left and follow the corridor along, opening a door on the way to the room with the two bridges. Cross the bridges, jump the gap and descend the stairs into the next large room. Throw the switch (watch out for wolves). Jump (quickly) across the platforms and through the door. Run up the stairs and fall through the floor. Run to one end of the corridor and jump across the central channel to the other side. Run to the opposite end, throw the switch, fall into the central channel and go through the exit.

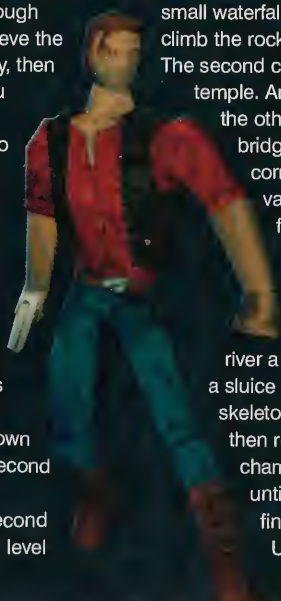


Throw the switch to open the doors. Makes sense really, doesn't it?

2 LEVEL 2 — CITY OF VILCABAMA

Kill everything then head left to find a switch by a door. Throw it and go through. At the top of the stairs leap across to the chamber opposite. Push the block here through into the next room. Retrieve the gold idol and a silver key, then climb onto the block you pushed and go through the door, falling back into the corridor. Turn right then right again and find the door with the silver key hole next to it. Use the key and go through.

Wipe out the wolves then enter the only door that's open. Leap up all the platforms until you reach a switch. Throw it then clamber down again and through the second door. Again, climb the platforms and throw a second switch. Return to ground level



Down boy. Bears may look fearsome but a few well aimed blasts to the belly will sort him out.

and enter the third and final door.

Don't run! Walk slowly and avoid the swinging axes. Pull the switch and fall into the water. Swim to the pool and into the secret underwater corridor there. Climb out and throw the switch. Now jump down into the pool, climb out and kill the bear. Finally, use the gold idol on the switch by the door, then go through.

3 LEVEL 3 — LOST VALLEY

Jump into the river and fall over the waterfall. Enter the cave opposite then climb the cliff ahead to find the Lost Valley. Kill the two Raptors then hide in a cave to the right from where you can safely dispatch the T-Rex.

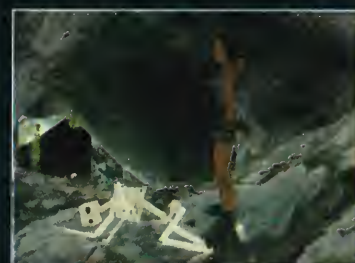
You must find three machine cogs here. One is in a pool at the base of a small waterfall. Swim through then climb the rocks to find it at the top. The second cog is in the pool in the temple. And the third cog lies on the other side on the broken bridge. Climb up through the corridor at the end of the valley then leap across to find it. Now return all the way back to the big waterfall at the start and climb up to the top.

Jump across the river a few times and you'll find a sluice gate where there's a skeleton and a shotgun. Grab it then return to the main chamber and keep going until you cross a bridge and find a machine.

Use the three cogs on it,



See that bridge? You're going to have to get up there to get the third vital machine cog.



Looks like this bloke wasn't cut out for this adventuring lark. Nick his medipack and press on.

throw the switch then swim through the now open door beneath the big waterfall. Away!

4 LEVEL 4 — TOMB OF QUALOPEC

Throw the switch to the right, kill the two Raptors. Then go through the corridor to find a crossroads. Go straight ahead first. Fall through the floor by the switch. Kill the wolves then pull then push the block and go through. Climb the blocks until you reach a switch throw it then fall down



Oil Stop messing about. Throw the switch and go through the door, avoiding the two Raptors of course.

the other exit from this room. Return to that crossroads and turn right.

Don't throw that switch just yet. Drop through the doorway into the large chamber and enter the corridor to your left which leads to the top of a pillar. Turn to your right and jump into the doorway above. Follow this corridor along, climbing blocks, until you reach the room's second outcrop block. Again, turn to your right then jump up into the doorway. Throw the big switch you'll find here.

Return to the large chamber and climb up to that first. Throw it and go through the new door to its right. Climb blocks until you reach the large chamber again. Now leap across the blocks and spikes to find a third switch. Throw it, and return to the crossroads.

Go straight on at the crossroads into the only unexplored corridor left and push the block in the wall then push the next block to your left. Throw the switch there, leap the pit of spikes that has appeared directly behind you and return to the start hall and through the now open corridor to find your first bit of the Scion. Return to the waterfall to finish the level.

5 LEVEL 5 — ST FRANCIS FOLLY

Kill the two lions then push and pull the block onto the two omega symbols. This'll open a door at the end of the chamber. Go through, kill the three gorillas and throw the two switches.

Go back to that movable block and push it to one end. Climb onto it, leap



Only one more room to go. The Neptune room is one of the easiest. Thank Christ.



Keep a look out to the right and up at the base of the Neptune tunnel to find the vital switch.

onto the block ahead, then onto the block to your right, then onto the roof of the gorilla room. Turn left and make your way along the balcony to the opposite end of the chamber and through the door.

Fall down the steep slope and into the water. Quickly swim to the other end, climb out and throw the switch. Kill the crocodile then go up the stairs at the other end of the chamber. Jump onto the structure in the centre of the room and work your way down to ground level, throwing all the switches you find on your way. There are four in total. Now all the rooms are opened.

The Damocles room is easy. Run in, grab the key then walk back out to avoid the falling swords. In the Thor room run through then step on the omega tile, avoiding the falling hammer. Use the block to get on the balcony then use the second block to climb up further. Leap across here to find the key. In the Atlas room step on the tile to open the gate then run quickly towards the rolling block then jump up to find a ledge to your left. Phew. You'll find the key there. In the Neptune room jump into the water and throw the switch you'll find at the bottom, which releases the key.

Finally use your four keys at the big door at the bottom of the large chamber.

6 LEVEL 6 - COLOSSEUM

Swim through the chamber then run to the left of the Colosseum. Climb onto the rocks at the end and jump across on the building's first level. Climb onto a stone there and up onto the second level. Run round to the front of the building and jump across into the cave at the other end of the balcony. Jump to the ledge to your left then



Avoiding the croc pit is easy. Just grab hold of a ledge and shimmy along for all you're worth.

shimmy across the croc pit. Go through the door then up the stairs to your right.

You will then be attacked by Frenchie. Keep shooting him until he runs off. Drop into the arena and through a doorway by the far left corner. Kill the two lions and throw the two switches then return to the arena and kill all the wildlife. Go to the corner with the rocks and through the door. Stand on the strangely coloured tile in the corner then run as fast as you can into the room on the left. Throw the switch here then leave this room and go into the next before the bars come down. Peg it through that small door in the corner before the gate shuts. Go through the now open door, past the spikes and up the rocks. Leap across to the other rocky outcrop then climb into the emperor's balcony. Pull the block there to reveal a switch. Throw it then drop down into the arena and up a climbable block in the far corner. Enter the room here and go through the gate. Quickly jump into the pit ahead to avoid being crushed by the rolling rock. Climb out and continue up the hill and throw the switch. Leave via the exit nearby and run to the next corner or the arena.

Once there jump up the platforms and throw the switch at the top. Go to the next corner of the arena and dive into the water. Swim to the end of the tunnel, climb out then push the panel. Throw the switch there. Next, pull the block away from the wall to reveal vital key. Return to the emperor's balcony. And use the key in the keyhole to the right. Swim through the corridor and find a room about halfway along which contains a switch. Throw it then return to the water and swim to the end.

7 LEVEL 7 - PALACE MIDAS

Go right and kill the croc. Climb the stairs and find the four doors in this large chamber, making a note of the symbols above them. Next go to the far right corner and climb onto the block there. Leap from block around and onto the building where you'll find five switches. Moving these switches opens the four doors according to their symbols: omega is up and Y means down. Three of the rooms contain puzzles yielding a lead bar and the fourth room contains the level exit. Attempt them in any order.

One room (unlocked by up, up, down, up, down, up) contains pillars surrounded by spikes. Go through the door to the right, move the block and

throw the switch then leap from pillar to pillar to find a lead bar. In another room (down, up, up, up, up) you'll find flaming pillars which must be quickly leapt across to find a second lead bar. In the third room (up, up, down, down, up) run across, through the door and turn right. Pull out the block then return and climb up the rocks to find a pool, a gorilla and a huge drop.

Jump onto the sloping rocks to your left to break your fall then jump through the archway onto the rest of the building. Stand in the second alcove from the end and face the chasm and the rock face ahead. Take a running jump at it and grab a hold of a near-invisible ledge. Shimmy left onto a rock then jump across the chasm, through a doorway. Follow the route past the start pool and emerge high above a chamber full of animals. Jump onto a pillar to your left and swim through the chamber there. Climb out and jump onto the roof of the building. Here you'll find the final lead bar.

Drop down from the roof and throw the switch through the door. Return to



Those spikes look a bit fearsome don't they? Make sure you don't get on the wrong side of them a little later on.

the pool at the start and head left into the garden room. Go to the right of the building and jump onto its roof. Go through the door and use your three lead bars on Midas's hand to turn them into gold. Finally, return to those switches, set them to down, up, up, up, down and go through the final door. Climb the stairs then use the three gold bars in each of the three alcoves to open the exit.



Next month you'll be able to dive into the second half of this solution.



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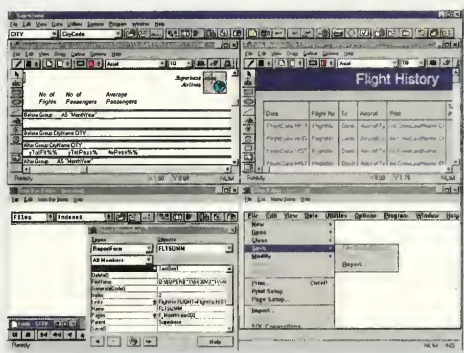


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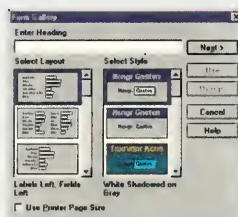
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MDI Development Environment



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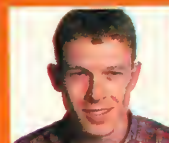
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PC REVIEW will point you in the direction of the finest multimedia atlas.

MULTIMEDIA



While there are plenty of interesting reviews to read in Multimedia, you might find CD REVIEW's multimedia section particularly interesting. We've filled it with exclusive material like never before. Firstly, you'll find a demo of Picasso, which we reviewed last month. Then, for owners of Creatures, there's the Creatures Christmas Kit which you'll never see on another cover CD ever. Add to that the amazingly funny Oddballz screen-saver, a special PC REVIEW demo of The Magician and the very first demo of the Ordnance Survey World Atlas, and we've got an unbeatable line-up.

Likewise in these pages. Multimedia atlases are rigorously reviewed, and for those with an interest in popular science we look at *Nine Worlds* and *Challenge of the Universe*. Wildlife lovers, meanwhile, will enjoy our look at *Worlds of the Reef*. And finally, have a look at *Versailles 1685*. We think it looks just brilliant. Garrick Webster
Deputy Editor
gwebster@futurenet.co.uk

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WHERE?

Is multimedia the perfect medium for maps? We put three CD-ROM atlases to the test.

Maps, eh? Where would we be without them? Where, exactly, would we be without them? Well, we can't really answer that because places as we know them wouldn't exist. Furthermore, we wouldn't be able to explain where we were in relation to somewhere else because we'd have no idea where that somewhere would be. Nor, indeed, would we know if it that other place even existed. A world without maps wouldn't be a world at all.

Thanks to the likes of *Encarta 97 World Atlas*, *3D Atlas* and the *Interactive World Atlas*, you can easily use your PC to work out exactly where you are in relation to everything else in the world. And you'll be able to find out a great deal about our planet and the people on it while you do so.

Just like Microsoft's best-selling multimedia encyclopedia, which also carries the *Encarta* name, the *Encarta 97 World Atlas* (World English Edition, of course) is absolutely splendid in terms of both content and ease of use. Not only does this disc locate some 1.2 million places on its fully rotatable zoomable globe, but it contains an immense amount of data on the continents, countries, cities and cultures of the world.

Click on a place in China, for instance, and very soon you'll be reading about the country's location, topography, rivers and lakes, climate, environmental issues and so on. Of more interest, however, is the 3,800 word essay on the country's culture. Read it and you might learn that seven per cent of the Chinese population is made up of ethnic minorities and that there are some 55 distinct ethnic groups in China. The country celebrates Confucius' birthday (also called Teachers' Day) on September 28 each year and Jingzhe, or the Feast of the Excited Insects, on March 5. Furthermore, after extensive details on how the Chinese government is trying to control population growth, you'll read that: "A habit that remains widespread in some regions although the government has tried to curb it is for people to spit in public after clearing their throats."

On top of the strict geographic details and cultural frivolities, for each country there is also a massive series of facts and figures screens devoted to all things numerical. You can find out a country's area, population, GDP, population growth, population density, urban versus rural percentages, literacy rates and plenty more. Finally, governmental information and basic economic details are also on hand.

And, if this barrage of information is sounding pretty unrelenting, don't hold your breath. There's more. *Encarta's* information on China also offers you 60 postcard-like pictures from the country, seven sounds and profiles of some 44 animals that are found there (with pictures of each one, naturally). And, to cap it off, you can meet the Wu family of Shiping, Southern China. By clicking through a series of photos and videos, you'll learn how an



Statistics on society and economics are a major feature of the 3D Atlas, which displays facts in a variety of ways. Here we compare Australia's GDP per capita with Iceland's.



WHERE?

WEB LINKS

To supplement the masses of information in the Encarta 97 World Atlas, Microsoft supports a Web site that links you to further information on your chosen subject. The box claims some 7,000 links, but not all of them are that useful. For instance, when looking at the Cote d'Ivoire we were directed to an African news Web site which reported no news from the Cote d'Ivoire...

PCR QUIZ

Welcome to PC REVIEW's really rather quite hard capital cities quiz. Can you name the capitals of these new and/or little known nations?

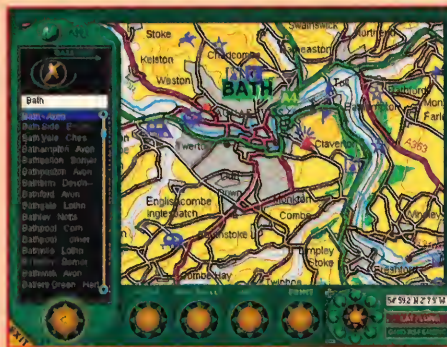
1. Belarus
2. Vanuatu
3. Eritrea
4. Tajikistan
5. Slovenia

Answers:
1) Minsk
2) Port Vila
3) Asmara
4) Dushanbe
5) Ljubljana

Ordnance Survey Interactive Atlas of Great Britain

World atlases are all very well, but if you seek a UK-specific multimedia atlas, the OS *Interactive Atlas of Great Britain* is your only option.

Though there is a small amount of UK and European Union statistical information, the core of the disc is a huge zoomable-scrollable OS map of the country. At a certain zoom level, pins appear in the map indicating the presence of photos, text or even video clips relating to a certain place. Zoom in even further, and the classic OS contour lines, roads, rail lines and usual array of symbols appear. But by the time you've



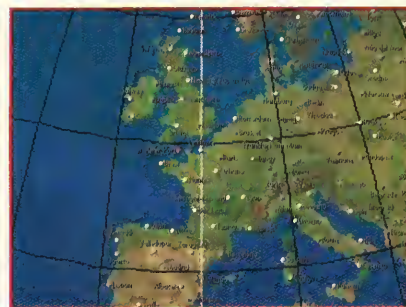
A typical view of the town in which you'll find PC REVIEW care of the OS *Interactive Atlas of GB*.

zoomed in this far, you'll be looking at only a very small piece of land. To properly enjoy the detail you have to give up being able to see exactly where you are in relation to bigger landmarks. In some ways, this limits the usefulness of the Atlas. This is compounded by the fact that the scrolling is quite wonky. Nevertheless,

using the gazetteer function you can instantly find any of the 45,000 places that appear and the maps do indeed look impressive. Also included are lesson screens teaching map reading skills. Other highlights include 3D models of Snowdonia and Ben Nevis.

DEVELOPER	PUBLISHER	CONTACT	PRICE	MIN SYSTEM
Attica	AirteQ	01908 570119	£39.99	485DX, 8Mb RAM, 4Mb hd

Reasonably good information and good maps, but the OS *Interactive Atlas of Great Britain* can be quite hard to use.



With the 97 version of the 3D Atlas, the map can be expanded to full screen size. Unfortunately, the resolution stays the same meaning finer details come up looking blocky.



Microsoft got the Calabayan family of Guatemala to put all their possessions outside their house for this photo. You can meet 31 such families from around the world.

► average family in rural China gets by, growing vegetables, doing the washing and catching fish.

While *Encarta's* globe offers quick and easy access to information on every country in the world, it's a different story with the *Interactive World Atlas* from Attica Cybernetics. Click on a country and a man's voice pronounces the name of that country. To access that land's facts, however, you have to look it up using the Gazetteer search option. When you do manage to pull up a Country Profile, you'll find it only has the bare bones facts.

The world is flat?

Rather than using a globe, the *Interactive World Atlas* uses a vector map of the world. Unfortunately, this redraws rather slowly as you zoom or scroll around. And despite the

disc's name, it isn't that interactive at all. To access anything, you have to zoom in close enough to see the map pins which are your gateway to pictures and text entries. These usually relate to cities or geographic phenomena, but as the disc is sponsored by the World Wildlife Fund, pictures and information on endangered species are also available. In no way, however, does this disc feel as easy to use as *Encarta*, nor does it contain the same depth or volume of information.

Good for pig and goat fans

3D Atlas 97, from Creative Wonders, fares little better. Like *Encarta*, it has a 3D rotatable and zoomable globe. And, like *Encarta* you can call up the details on a country by simply clicking on it rather than doing a search. Admittedly, the information is interesting and the screens are well designed. Compared to

Encarta's 60 pictures from China, and the *Interactive World Atlas's* 31, here there are only seven. The facts available are also rather scant, though, curiously, the disc can tell you the pig and goat population of every country, as well as the number of humans living there. The Ivory Coast, for instance, has 404,000 pigs in it, while Canada has in excess of 11 million.

The detail of the maps in *3D Atlas* is also somewhat lacking. Rivers are represented not by lines delineating the flow of water, but by icons. Likewise with mountains, volcanoes and oceanic trenches. *3D Atlas 97* is, however, quite easy to use. Pleasant music, themed to the region you're looking at, plays as you use the CD. Whereas the *3D Atlas* is short on country-specific details, it does contain heaps of multimedia presentations. You can see animations of changing vegetation



▲ Country profiles in the *Interactive World Atlas* carry the bare bones statistics and facts for each country.

◀ *Encarta* definitely dominates when it comes to photos. In fact, it contains some 2,900 of them. This one, showing the Kayapo Indians of Brazil, is accompanied sounds of their singing – one of 350 musical selections on the CD.



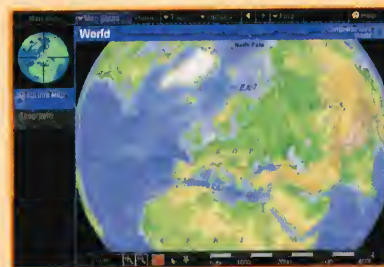
ONE WORLD, THREE MULTIMEDIA ATLASES



The Interactive World Atlas is based on a 2D vector map of the world rather than the other products' globes, and features various navigational tools. Only one map style is available, but this is fully customisable. You can, for instance, add, eliminate or edit all contour colouring.



3D Atlas 97 has a 3D globe as its key feature. Political, physical and environmental maps are available, and the globe is also used to demonstrate such phenomena as wind patterns, ocean currents and tectonic plates. Icons for cities, rivers and mountains can be added or removed.



The Encarta 97 World Atlas is so good it's almost unreasonable to compare it to the other two discs. Everything in it is accessible by clicking on this 3D globe or via menus. Comprehensive, political, tectonic, population, eco-region and other map styles are available.

CD REVIEW

A demo of the OS Interactive Atlas of Great Britain.

Interactive World Atlas

DEVELOPER
Attica Cybernetics
PUBLISHER
AirtelQ
CONTACT
01908 570119
PRICE
£39.99
MINIMUM SYSTEM
Minimum System:
486DX, 8Mb RAM,
double speed CD
drive, Win3.1 or 95

It has the basics but isn't really as 'interactive' or easy to use as its title suggests. Good value.



PC REVIEW VERDICT

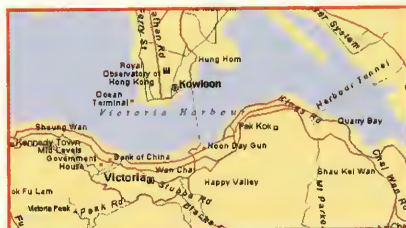


The Interactive World Atlas enables you to compare countries' statistics. Here's Argentina v the UK in employment by sector.

patterns or continental drift illustrated across the same 3D globe that is central to this disc. Likewise, there are videos on the hole in the ozone, rising sea levels, overfishing, oil pollution and extinction.

No comparison?

Comparatively, it seems unfair to judge the Interactive World Atlas and 3D Atlas 97 with the Encarta 97 World Atlas. Sure, they both have plenty of interesting features. The former, for instance, has an instant distance measuring tool. Just select two places from those listed and you can see how far apart they are. It's 4675 miles from Lhasa to Lincoln, for example. Likewise, it has an interesting charting function that lets you compare statistical data from two countries. Did you know that the Ivory Coast and Nepal have the same death rate of 13 per 1000 per



The Encarta 97 World Atlas includes street maps of around 50 cities. As you can see by Hong Kong's, they aren't all that detailed.

year, though the Ivory Coast's GNP per capita is five times Nepal's? You do now.

The 3D Atlas, meanwhile, uses video flyby sequences and narration to introduce numerous terrain types, as well as important environmental issues. In addition, it has a massive Statistics section in which you can graph information of all descriptions including government expenditures in various sectors, energy consumption figures, agricultural output, transportation data and so on and so on. Some of the numbers available stretch back into the 1970s. Not even the mighty Encarta can tell you that 70 per cent of Costa Rican couples use contraception, or that Malaysian households contain about 5.2 people.

Neither disc, however, is held together as seamlessly as the Microsoft disc. The only thing Encarta can't do that the others can, is



The Interactive World Atlas is endorsed by the World Wildlife Fund – the Giant Panda, symbol of the fund, can be found at Xi'an, China.

create graphs comparing stats from two countries. Otherwise, it is a simply astounding piece of multimedia. The key is the fact that all of its content is accessible via the maps. With no annoying menus or clicking your way around sub-screens, you can concentrate on what atlases are all about: the maps. And with Encarta, not only is it easy to find your way around by scrolling and zooming, but the maps have far more on them than those in either of the competing discs. Populations and minor details on numerous towns and cities are available, and even if you click on open ocean you're likely to be given some information on its geography or the animals living there. In fact you can easily forget what you were looking for in the first place and end up simply browsing. The Encarta 97 World Atlas is definitely where it's at when it comes to multimedia atlases. (GW)

3D Atlas

DEVELOPER
Creative Wonders
PUBLISHER
Electronic Arts
CONTACT
01753 549442
PRICE
£29.99
MINIMUM SYSTEM
486DX2/66, 8Mb RAM,
486, 8Mb RAM, double
speed CD drive,
Windows 3.1 or 95

Well designed, with good presentations and lots of stats. Too few places and not so well integrated.



PC REVIEW VERDICT



▲ Though the Interactive World Atlas has WWF backing, it's Encarta that makes animal pictures and information most accessible.

◀ Among the many multimedia extras in the 3D Atlas is this video flyby briefly describing the characteristics of conifer forests.

Encarta 97

DEVELOPER
Microsoft
PUBLISHER
Microsoft
CONTACT
0345 002000
PRICE
£49.99
MINIMUM SYSTEM
486DX/33, 8Mb RAM,
10 Mb hard disk space,
SVGA, double speed
CD drive, Windows 95



Expensive but essential. One of the finest multimedia reference discs ever published.



PC REVIEW VERDICT

THE MAGICIAN

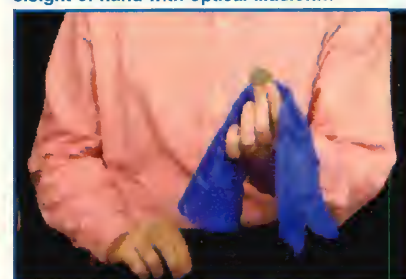
Need to impress your mates, or break the ice at parties, then get Telstar's new box of tricks on CD-ROM.



The CD is worth the price for this secret alone – one which will enable you to beat the 'Find the lady' card sharks. What's disappointing is how easy it is to spot once you know how it's done – but that can be said of all tricks, be they performed by money-grabbing touts or pros.



Simple items can appear much more complicated. The Chinese Compass combines sleight of hand with optical illusion...



The Coin Through the Hanky trick is a seemingly impossible feat pulled off with amazing ease via a simple secret move.

CD REVIEW

In the chock full multimedia section of our CD-ROM we feature a demo of *The Magician* in which you can watch a trick.

PUBLISHER
Telstar Electronic Studios
DEVELOPER
CTV Facilities
CONTACT
01932 222232
PRICE
£29.99
MINIMUM SYSTEM
486 DX/33, 8Mb,
Windows 95, 45Mb hard
disk space, VGA,
CD drive

Well presented and packaged – great for showing-off your conjuring skills without joining the Magic Circle

PC REVIEW VERDICT

8

There is only one thing you need to know about magic:

it does not exist. David Copperfield didn't really make the Statue of Liberty disappear, he merely pointed a load of high-powered torches at the television cameras. Levitation is just a combination of dark back-grounds and thin wires. And Paul Daniels, more's the pity, has never, ever really cut up the lovely Debbie Magee.

Telstar's *The Magician* is a CD-ROM aimed squarely at those that wish to baffle their friends and younger relatives with a series of tricks that require little or no practice. It's not for the experienced magician; rather those that fancy dipping their toes in the conjuring pond.



These three pieces of rope started life as different lengths. It's probably one of the most difficult tricks to master – but also one of the most baffling for audiences.

It's as simple as that. Most can be picked up and put into practice within a couple of minutes. The theory is explained concisely, it's summoning the confidence to perform the tricks in front of an audience that proves difficult.

Most tricks are self-working, meaning you need no real experience to effectively baffle your mates. In addition to the typical card, coin and rope tricks, there

are sections for computer magic, impromptu magic and props, as well as explanations of the great cons that dodgy street traders make their livelihoods from. This variety of magic means that you will be able to perform most of the tricks on the CD-ROM no matter what your surroundings.

One step at a time

Each trick is introduced by the affable Mr Fields, and most are split into three sections: the trick itself, the secret, and a step-by-step guide to performing it for real. The video sections, while not of the highest quality, work

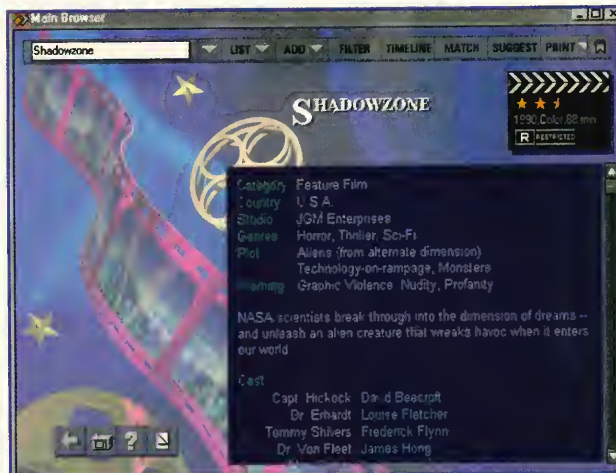
Easy tricks

The disc contains over 60 tricks, each introduced and demonstrated by magician Keith Fields. Just select the type of trick you are after and follow the clear QuickTime video.

The biggest disappointment about magic is how once the secret is revealed it all seems so easy.



Pretending to be a 3D environment but failing miserably to get away with it, this single illustration contains all the hot spots you can click.



Most of the movie reviews offer a paltry two-and-a-bit lines of text with rating, cast and running length, but no photos.

COREL

Could this new light flickering across the screen represent a real challenge to the genre-defining *Cinemania 97*?

ALL-MOVIE GUIDE 2

If there's one thing that spoils a happy half hour rummaging through the movies in your local video shop, it's knowing that you're going to have to take one home and be disappointed with it. And Corel has managed to build this sensation into its *All-Movie Guide 2* (there always has to be a sequel doesn't there?). This virtual video store has listings of just about every movie ever made. With a total lack of even the shortest video clip or sound bite, you can get on with the serious business of, well, just reading about them. It might sound dull, but in fact it's worse than that, unless you happen to be a movie fan of the severest intensity and are determined to be the next pub quiz champion of the world.

Going for sheer volume, the *All-Movie Guide 2* lists more than 100,000 movies in total – five times the piddling little amount in *Cinemania 97*. There's also 'data', to use

Going for volume, the *All-Movie Guide 2* lists more than 100,000 movies.

Corel's glitzy description, on over 174,000 industry professionals. All of these inhabit the shelves and counters of the 3D Video Store. However, this rather grand euphemism boils down to a very basic illustration of the inside of a video shop. You can't move around or explore, just click on different hot spots to look at the relevant section. And, more disappointingly, all of these are flat, dull and samey. For a company that made its name with state of the art graphics and image manipulation software, the look of the *Guide* is a bit of a joke.

While there are 100,000 movies in the database, the multimedia extras that you expect on this sort of CD-ROM are minimal in the extreme. The most exciting thing you get is a couple of stills or a bit of poster art and this luxury is reserved for just 1,250 films and 815 people. Likewise most of the reviews are only half a dozen lines long, and

unlike *Cinemania*, there aren't two or three different critics on hand to compare. The detail on some of the more obscure films is outrageously poor, making you wonder why the developers bothered putting them in at all. Look up *On Jesus*, for example, and you're told that it's a 20 minute colour religious documentary made in 1980 by Bhagwan Shree Rajneesh, and that's your lot. Mind you, that's probably more than you wanted to know anyway.

There are some neat touches, like the Birthday List that tells you who in the biography list is celebrating a birthday on any given day. The Timeline is particularly good and there's a handy gizmo for picking films by mood. And unlike the particularly crass popcorn icon that just makes a popping noise when you click it, there are some genuinely taxing trivia games and crossword puzzles to solve. The *All-Movie Guide 2*, however, is just a big database of film titles and people. A telephone directory or listing of piston engine parts could be just as interesting. (MR)

WHAT OF COURTNEY COX?



"At the age of 21, Alabama-born actress Courtney Cox made her series TV debut as a teenaged juvenile delinquent with a genius IQ in the sci-fi series *Misfits of Science*. Both the series and Cox's role were soon forgotten, but she enjoyed a longer run starting in 1986 as Lauren Miller, Alex Keaton's (Michael J Fox) girl friend, on the popular sitcom *Family Ties*. Cox replaced Tracy Pollan, who left the series but married Fox in real life. In Cox's own real life she became the longtime companion of another Keaton, this one an actor whose first name is Michael. After appearing in several films, notably the Jim Carey vehicle *Ace Ventura Pet Detective* (94), Cox was cast as New York career woman/heatness freak Monica Geller on the instant-hit 1994 TV comedy *Friends*." – Corel *All-Movie Guide 2*

DEVELOPER

Corel

PUBLISHER

Channel Marketmakers

CONTACT

01703 814142

PRICE

£23.49

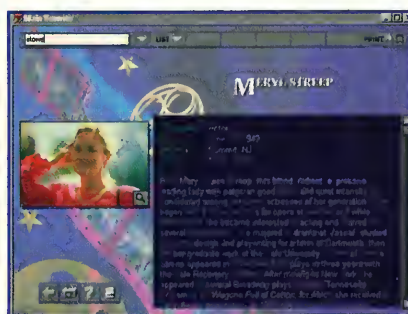
MINIMUM SYSTEM

486DX2/66, 8Mb RAM, 256 colour VGA, Windows 3.1 or 95

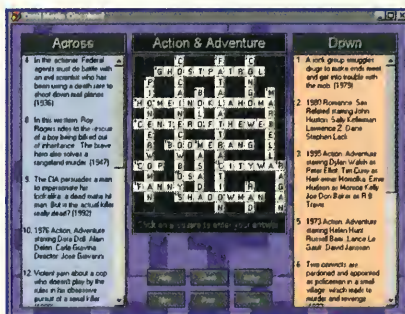
PC REVIEW VERDICT

Updated version of the original complete with Internet links and flexible search engine, but too dull.

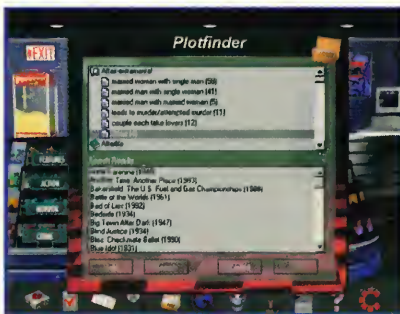
4



Type 'Stowe' into the 'People with pictures' browser and you get Meryl Streep. Now this is just plain wrong.



The games section has a tricky trivia test for up to four players and this crossword. If you get stuck you can tell the PC to do it for you.



The plot finder is brilliant. Extra-marital affairs often lead to murder/attempted murder and aliens are good, bad, sexy or 'other'.

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Fragile Allegiance (0040)

Gremlin RRP £39.99

Mine asteroids and build space fleets in this fantastic new strategy game from Gremlin. As an employee of TerraCorp, you're up against five alien races, all competing with each other to plunder the asteroid belt of its riches. You can try a diplomatic approach, making pacts with your tentacled counterparts, or you can simply boil them into a primordial slime with your Star Destroyers. Remember *Asteroids*? *Fragile Allegiance* is miles better.

Realms of the Haunting (0041)

Gremlin RRP £44.99

This could be the game that changes adventures forever. Your father's mysterious death has prompted you to explore an old manor house for clues (when will people learn to stay away from old country mansions?). With its complex puzzles and involving, first-person-perspective, *Realms of the Haunting* puts you right into the terrifying action – just where you don't want to be! All the characters in the game were motion captured, with the full motion video shot using advanced blue-screen techniques.



Simply 3D Super Pack (0042)

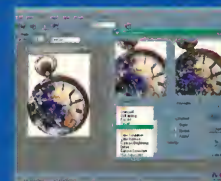
Micrografx Originally sold for £79

With its high performance rendering engine, mass file support, quality textures and materials and complete object control, *Simply 3D* is simply the 3D animation package you've always wanted. Keyframe animation enables you to define camera paths on the fly and focal lengths for each view. All you need is imagination. (Otherwise, try ripping off someone else's' devastatingly attractive sci-fi film.)

Windows Draw 4 (0043)

Micrografx*

Windows Draw 4 is the ultimate printing and graphics studio. While there are many packages on the market combining every facet of image manipulation, few are so consistently reliable. You can use *Windows Draw 4* to produce all your postcards, letters, certificates and the like that you could possibly need. There's stacks of clipart and typefaces on the disc for use in your own projects.



Graphics Works (0044)

Micrografx*

Here's a complete set of graphics tools, all bundled into one pack. With *Graphics Works* you can wow your colleagues with your graphical prowess. There are drawing functions, with full support for Bezier curves, object manipulation tools and special effect filters. There's a whole suite dedicated to photo editing and, to top it off, *Graphics Works* even comes with a slideshow program for presentations.

*Please note: *Windows Draw 4* and *Graphics Works* are not boxed. You will receive the fully working program on a CD in a specially designed dual case.

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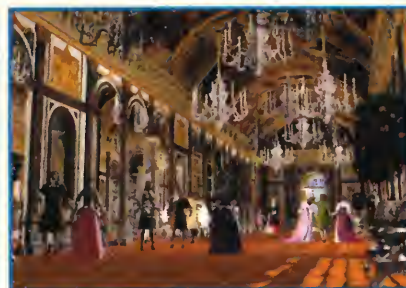
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WATERING THE GARDEN...

"30,000 men, stonemasons and soldiers worked on a project of Herculean dimensions: rerouting a river, the Eure, in order to supply the fountains at Versailles. For water which is essential for the ornamentation of the gardens is in desperately short supply. The chateau is 100 meters above the level of the Seine and the region is without springs... The Eure never came to Versailles and war put an end to the project." Historical information taken from the disc.



The Staircase of the Ambassadors.



The beautiful Hall of Mirrors is populated with chattering nobles.



You'll get to go to the amphitheatre, and you'll also have to negotiate the hedge labyrinth.

VERSAILLES 1685

A GAME OF INTRIGUE AT THE COURT OF LOUIS XIV

Join the staff of the Sun King and explore the wonders of Versailles in this attractive multimedia historical adventure.

DEVELOPER

Cryo

PUBLISHER

Centresoft

CONTACT

0121 625 3399

PRICE

£39.99

MINIMUM SYSTEM

P75, 8Mb RAM, 2Mb hard disk space, double speed CD drive, DOS or Windows 95

A glorious look at an architectural treasure coupled with involving and purposeful gameplay.

PC REVIEW VERDICT

8

Now perhaps the world's most beautiful palace, in the time of Louis XIII of France Versailles was merely a hunting lodge. That was until his son Louis XIV decided to turn it into a symbol of his power, a task that took 36,000 workmen 20 years to complete. For Louis XIV, who strongly believed in the divine right of kings, the building of Versailles was a way of raising himself above the menial nobles of France.

This CD is produced in collaboration with the Reunion des Musées Nationaux, and aims to bring a 3D version of Versailles to your PC for you to explore. It includes many of the

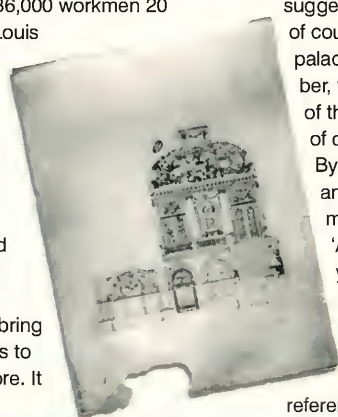
chateau's great paintings and more than 30 figures of the court also modelled in 3D from period representations.

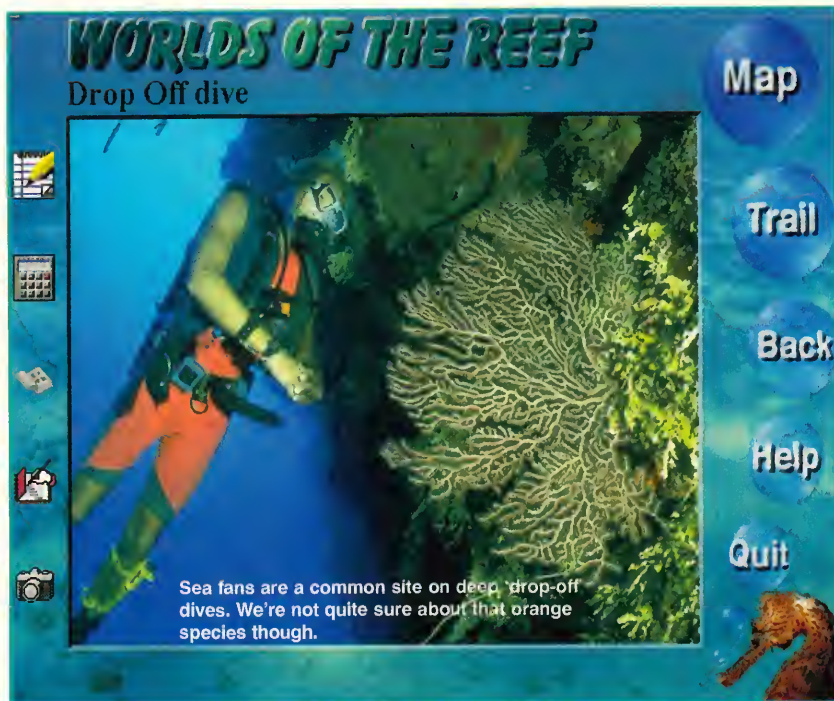
The premise of the game element is this: a cryptic poem has been discovered which suggests that beneath the opulence of court life lies a plot to destroy the palace. As a valet of the bedchamber, you must discover the source of the conspiracy and foil the plots of certain figures close to the King. By conversing with other courtiers and finding certain objects, you must progress through seven 'Acts'. Along the way, of course, you will hopefully learn a little about Versailles by clicking on the paintings and people to read background notes.

The concept of combining reference with a game or exploration

element to spark user interest is not new. Versailles, however, goes much further than most discs. It hits the mark with a real sense of purpose to the game and an incredible attention to historical and architectural detail. You become immersed in life at the palace and thanks to Cryo's superb Omni 3D modelling technique the virtual environment seems almost as good as the real thing. Should you wish to wander around great rooms such as the Hall of Mirrors without having to progress through the game, you can visit in a tourist capacity, viewing text screens on anything from the history of the building itself to the people who characterised court society.

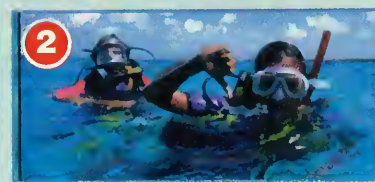
Versailles 1685 is a visually stunning guide to one of the world's finest buildings and is packed with information on 17th and 18th century France. It should entertain even the most uninspired history student. (JT)





PCR Quiz

Try guessing the meaning of these sub-aquatic hand signals...



THE DEEP END

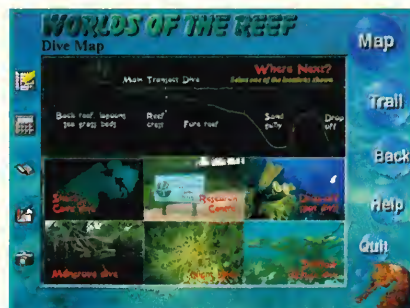
The Coral Cay Conservation organisation, which was closely involved in making *Worlds of the Reef*, is a UK-based charity that focusses on the plight of coral reefs. Each year CCC recruits hundreds of volunteers to take part in shallow water surveys in some of the world's most beautiful places. The efforts of its volunteers have resulted in the creation of seven 'Marine Protected Areas' in the Caribbean and Indo-Pacific. Call 0171 4986248 for more details.

WORLDS OF THE REEF

Take the plunge with this new underwater safari. You did remember to pack your flippers, didn't you?



Grunts shoaling around a whip-like soft coral.



Five dive sites are available at Belize. Each corresponds to a distinct zone of the reef.



Many of the creatures you'll find are described in movies.

Swimming with the manta rays, you quickly realise that Hollywood's giant clams grossly oversimplify the coral reef's natural wonders. In fact, with 1997 designated the International Year of the Reef, Ransom's new CD-ROM comes as a timely reminder of the threat we pose to these aquatic rainforests. It's certainly far greater than the appetite of those mythical man-eating molluscs.

Rather than being a straight reference work, *Worlds of the Reef* attempts to simulate a trip to a field centre in the Caribbean. You arrive by speedboat, dump your bags in a stilt-raised shack and get shown around the Marine Research Centre, Belize. It's got a library, briefing room and a satellite connection to other reefs around the world. But while looking at the coral exoskeletons – the calcium remains of once-living coral – that adorn the centre's shelves is quite interesting, you've really come to see the life underwater. So your first stop is the dive training session. It's fun, but fairly useless. Next, you can choose your first dive location.

It was Charles Darwin who first classified reefs, suggesting three categories. Fringing reefs run close to the coast, and are geologically the youngest. Barrier reefs form further out to sea, running parallel to the edge of the continental shelf. Finally, there are the coral atolls. These oceanic reefs encircle volcanic

islands, which often subside to leave just the doughnut-shaped atoll.

Belize is a fringing reef, which determines the diving available. Marine creatures tend to live in tight zones. For example, you'd expect to find manatee (a sort of clumsy dolphin) in the quiet lagoons behind the reef. Conversely, fast swimming surgeonfish shoal above the reef crest, where the coral buttresses meet the ocean. Species not endemic to the Caribbean – like the clownfishes that inhabit stinging sea anemones – can be studied via the satellite uplink.

Worlds of the Reef is a shallow disk. It doesn't claim to be an aquatic *Encarta*, but many of the creatures are so fascinating you simply must know more. It hooks you, reels you in, then provides just a glossary and an inadequate number of photos. It feels incomplete. Instead of a comprehensive picture library, the makers have packed in lots of commentary and video, which makes the diving more entertaining but greatly reduces the space for other material.

Worlds of the Reef's best quality is passion. It's clearly been made by people who love the ocean, which partly makes up for its inconsistent quality. A BBC science documentary as opposed to an Open University lecture series then, but if you want to experience the reefs first hand, you won't get closer without donning fins. (OB)

DEVELOPER
Ransom Publishing
PUBLISHER
Ransom Publishing
CONTACT
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PC REVIEW VERDICT
A stimulating look at tropical life undersea. A slight disk, it prompts more interest than it can satisfy.

7

Answers
1. Are you okay?
2. Let's go
3. Danger! Danger!



Nine Worlds, among other things, offers you the chance to learn what the ancients thought about the planets in the Mankind's View section.



You can find out how the universe works via slick animations and movies.



View your favourite planet by selecting it from the historic 'orrery'.

DETERMINISM VERSUS CHAOS

'An intellect which at any given moment knew all the forces that animate Nature and the mutual positions of the beings that comprise it, if this intellect were vast enough to submit its data to analysis, could condense into a single formula the movement of the greatest bodies of the universe and that of the lightest atom; for such an intellect nothing could be uncertain; and the future just like the past would be present before its eyes.' – Pierre Simon de Laplace, 18th century mathematician.

NINE WORLDS

Popular astronomy comes of age with the release of this Web-linked guide to the solar system.

Until the Polish astronomer Nicholas Copernicus published his 'On the Revolutions of the Celestial Spheres' in 1543, the prevailing and rather arrogant opinion was that our planet was the centre of the universe. Indeed, backed by figures like the Greek philosopher Aristotle, this postulation that we are a privileged species inhabiting a world at the centre of everything became dogma, and in some societies even questioning it was punishable by death.

Copernicus' suggestion that the Sun is at the centre of the solar system shattered centuries of ignorance, sparking off new interest in other planets while begging the question: are we alone? Created with budding astronomers in mind, *Nine Worlds* enables us to explore the intricate workings of our celestial home and provides a wealth of detailed information on our nearest planetary neighbours.

Exploring the planets

The logical first port of call is perhaps an investigation of the planets, arguably the most impressive information on offer. Here we find a collection of quality video footage reconstructed from radar data collected by NASA space probes. This takes us skimming across virtual planetary landscapes. Guiding us through these images, accompanied by Gustav Holst's *The Planet Suite*, the mannered voice of Patrick Stewart delivers a suitably dramatic narration.

With the video clips, this module con-



So is there really life on Mars? Go on-line to find out at the *Nine Worlds* Web site.

tains details on the anatomy of each planet. You can read interviews with leading astronomers or play around on the Vacation Planner, a fun gimmick which asks the user to answer questions such as 'how much would you weigh on Mars?' Celestial bodies are not the only focus of the disc, however. Mankind's View looks

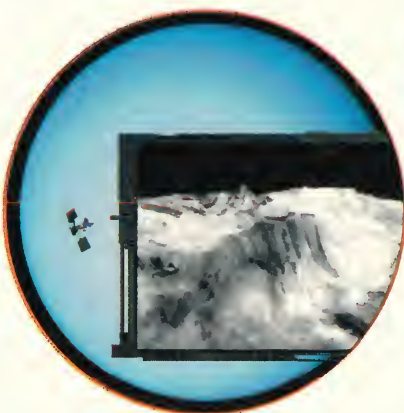
at our changing perception of the heavens. It begins with stone-age man and progresses through the religious beliefs of the ancient civilisations and scientific discoveries of astronomers such as Galileo and Newton, right up to modern day theories such as relativity. Unfortunately, the attractive visuals often belie a lack of detailed information.

Net gains

Although the main body of the disc will entertain amateur astronomers who'll

doubtlessly enjoy the complementary sections like Test your knowledge and This Day in Astronomy, what may lead them to purchase the disc over a video is an on-line link devoted to putting the user in touch with the vast resources of data available from Net sites such as NASA and the Hubble Space Telescope. This is a thoughtful inclusion that significantly adds to *Nine Worlds*' longevity. Of course, users must already be connected to the Net for this feature to be of any value.

Web sites aside, although *Nine Worlds* is a polished and often dramatic CD-ROM, those people looking for a serious astronomical reference work should think twice about it because the depth of information is distinctly limited. (JT)



▲ You can discover the composition of the planets via 3D cutaway diagrams.

◀ *Nine Worlds* includes striking 'artists impressions' of remote planetary surfaces.

DEVELOPER

Palladium Interactive

PUBLISHER

Omnimedia

CONTACT

0181 974 6766

PRICE

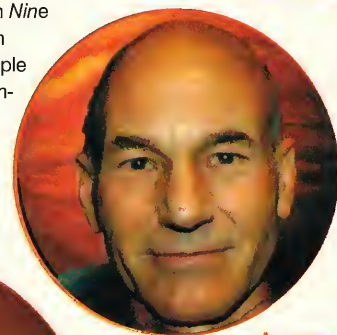
£39.99

MINIMUM SYSTEM

486/33, 8Mb RAM, 4Mb hard disk space, SVGA, double speed CD drive, 8-bit sound card. Optional: Modem

PC REVIEW VERDICT

An enjoyable and useful orbit around an interesting subject. Could do with more in-depth information.



A voyage with Patrick Stewart. Going baldly...

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THE WORKS



Month in, month out, *The Works* is the section where you're guaranteed to find reviews of the latest hot hardware and software.

Creativity is one of our key themes this month as we take a look at clip art, photo and graphics CDs. If you're looking for images to jazz up anything you just happen to be producing using your PC be sure to read this wide ranging round up.

If you've ever wanted to make your own game, have a look at our review of the *Games Factory*. On the hardware front, meanwhile, we test CD-ROM drives, speaker and some new 3D graphics cards. Our helpline tackles the questions you want answered in Q&A.

Mat Broomfield
Technical Editor

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Picture from Photodisc



RAW MATERIALS

With the right images, your PC visuals won't be ignored. Add punch to your graphics with these collections.

We might have five senses, but we rely on our sense of sight the most. Of course, we use our eyes to guide us in our daily lives, directing us as we move around the world, but there's far more to it than that. You have a highly developed aesthetic sense, which is expressed in the clothes you wear, the way you decorate your house and even the way you treat your body.

Advertising designers are trained in the art of catching our eyes and persuading us to buy things. The right page design, coupled with the right choice of images, can set the perfect scene, expressing at a glance sentiments that would take pages of words to say. Bright images shout life and vibrancy, subdued colours evoke sensuality, tranquillity or danger.

Needless to say, the ad execs have tens of thousands of pounds to spend on adverts, but you can bring the same techniques to bear in your multimedia projects and printed documents for a fraction of the cost. Ideally, you'd go out and photograph the perfect image for every occasion, but in the real world that's just not feasible. Fortunately, there are

countless digitised images just waiting for you to discover them.

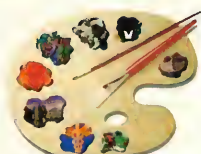
These images broadly fall into two categories which are aimed at professional or amateur markets. The professional collections tend to contain far fewer images, typically only 100 to 500, but these are offered in multiple sizes and resolutions, right up to massive, poster resolution sizes. Amateur collections tend to contain far more images, but their resolution is much lower, which restricts the range of uses to which they can be put. Such images are best suited to multimedia work.

Now you might be thinking to yourself "Why don't I just scan what I want from a book or magazine?" The answer's simple: copyright theft! Any image you see in a public place is owned by someone, and copyright infringement is a serious no-no. Fair enough, if you're just putting together a card for your Aunt Maud's birthday, something for your personal use that will never make it into the public's gaze, you can get away with it perfectly safely, but as soon as you start producing images for public viewing – perhaps as posters or flyers – you can

expect serious fines if you get caught using other people's work without permission.

That's one of the advantages of digital stock photography and clip-art; it's all copyright cleared. Although you don't buy the copyright itself, you have bought the right to use the images in a variety of commercial situations, provided you don't create products in which the images are the central part – such as post cards or photo books.

There are literally thousands of image collections available, many of which are pure shovelware fit for the waste paper basket. At *PC Review* we're a bit more discerning, so you don't waste your time reading about rubbish. Nevertheless, if you're contemplating buying an image collection that you see on a shop shelf, ask one simple question before you decide: "Does this collection come with a printed catalogue?" If the answer's no, think twice before you buy – you'll waste more time loading browsers than you'll ever spend using the images, which are often of low quality anyway. Without further ado, turn the page for the very best image resources that we could find. **(MB)** ►



RAW MATERIALS

THE SEARCH CONTINUES

Most graphics users are continually on the look out for exciting and original new images, and there's no better place to look than on the Internet.

There are literally hundreds of thousands of Web sites, and in many cases, you can download graphics from them directly. An even richer source, are the binaries newsgroups, where you'll find images on everything from classics works of art, to naked film stars!

These images are available in JPEG or GIF formats, so there's often a compromise between quality and file size, and you'll find that the images are not suitable for printing at sizes above half a page.

Four to Wrap Pack

We wouldn't usually bother with collections this basic, but it's such excellent value for money we made an exception. This four-pack contains 1,500 photos (no printed catalogue), 1,000 fonts (still no catalogue), 5,000 bits of clip art (you can guess what goes here), and *Pressworks 2*. As you'll probably use these raw materials in a DTP environment, it makes sense to include a proper DTP package with it.

OK, so there are no catalogues, and the photos are low res, but as a collection this represents an absolutely perfect starting place for beginners. There are enough images and fonts to keep your documents lively, and by the time you've mastered the DTP program you'll be ready for something a bit classier, as far as images go.



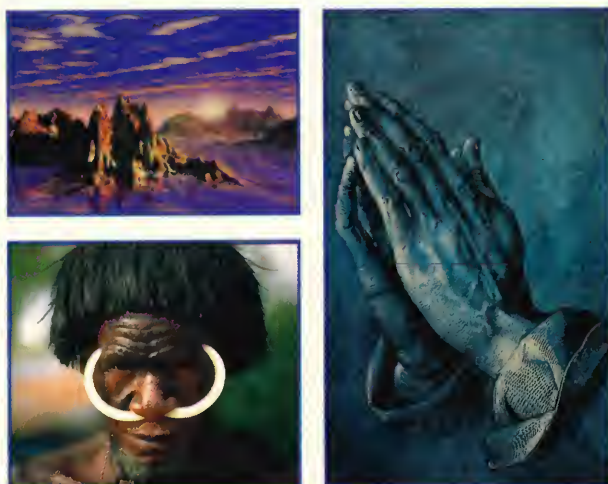
DEVELOPER	PUBLISHER	CONTACT	PRICE
GSP	GSP	01480 496575	£49.95

With a complete selection of raw materials, and an easy-to-use DTP package, this is the perfect beginner's kit.



Corel Super Ten

There are loads of sets in the Super Ten range, but this is certainly the cheapest way to acquire lots of multi-resolution images. Each themed pack contains 100 photos stored in PhotoCD format. That means each image comes in at least five resolutions, from 128 x 192 up to 2,048 x 3,072. The images can also be loaded in greyscale, or any colour depth from 256 up to 16.7 million colours. Many swear by the format, although professionals tend to steer clear. The quality of previous Corel PhotoCDs has been extremely lacking, but since they released Stock Library 3 (200 PhotoCDs for £800), there's been a marked improvement, not least in the actual subject matter on offer. It's inconvenient to have to convert the images into a more useable format, but at this price it's well worth the effort.



DEVELOPER	PUBLISHER	CONTACT	PRICE
Corel	i & J	01926 612554	£47

The pictures aren't as strong as they might be, but there's nothing at all wrong with the price.



KPT Power Photos

There are four sets of Power Photos, each comprising at least 375 images stored on six to ten CDs. The first collection was supplied in a light card-board box, but the subsequent volumes come with their own plastic case.

Each diverse set of pictures is divided into five themes. Although the first volume included built-in channels, later volumes extended this idea to incorporate transfectance channels – revolutionary masks that let objects such as glass retain their transparency when overlaid on background images. This is possible because the images are stored in TIFF format. Pictures are provided in high and low res versions. They aren't a fixed size, the high res images are roughly 2,000 x 3,000 pixels in size. Volumes 1 and 4 are the best, but the entire collection is superb, especially at the price.



DEVELOPER	PUBLISHER	CONTACT	PRICE
MetaTools	Principle	01756 704000	£151.58

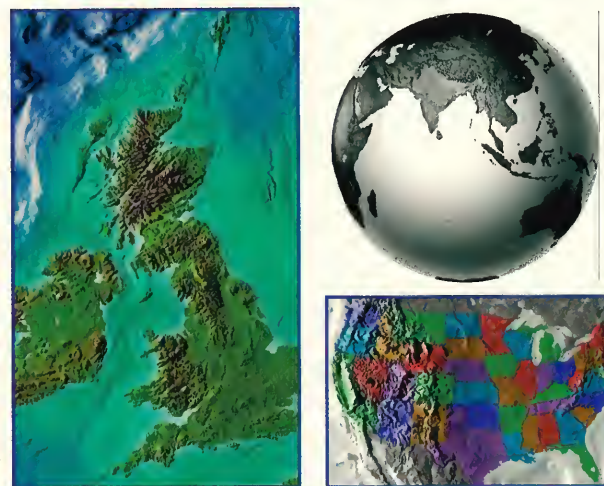
The Power Photos represent a good entry point for people seeking something a bit more professional.



Mountain High Maps

This is far and away the most intriguing stock collection, for it contains 74 maps covering the entire world. There are also 39 globes. The maps are all stored as greyscale TIFFs in two resolutions – 72dpi and 300dpi. The maps are computer-generated, and have been created using USGS satellite information. You might think that greyscale is an odd format for stock photos, but the idea is you colour them yourself, using tints, washes or whatever. Each comes with masks and clipping paths around political boundaries, so it's easy to colour countries in according to your needs.

The collection is expensive, but remember, these aren't the sort of photos that a budding David Bailey could snap at Blackpool. They're already being used by weather forecasters and news stations worldwide.



DEVELOPER	PUBLISHER	CONTACT	PRICE
Digital Wisdom	Digital Wisdom	01494 883228	£449

If you work in the Earth sciences, you'll be able to justify the high price of these beautiful maps.



Digital Stock

Digital Stock is one of the two major players in the world digital stock photography market, along with PhotoDisc. It stores all of its images in PhotoCD format, although over the last year or so it's used a high-end Crosfield Celsis drum scanner to actually digitise the images. Although each of the 66 CDs in the range only contains 100 images, they're chosen with great care, and this gives you a better selection than their rivals who may provide more pictures. They also come with free Kodak colour management software, which enables you to get precise, perfectly-balanced colour output, whatever you're printing on.

Like the Corel Photo CDs, each Digital Stock image is supplied at five resolutions, ranging from 128 x 192 up to 2,048 x 3,072, and greyscale, 8-bit and 24-bit colour.



DEVELOPER	PUBLISHER	CONTACT	PRICE
Digital Stock	Adobe	0131 451 6888	£233.83

International award winning photographers ensure that there's never any dross on Digital Stock disks.

8

Photodisc Volumes

Photodisc has been collating digital stock for far longer than Digital Stock Corporation, and it's a greatly respected company. Its library of images is divided into several series. Discs within these series cost between £163 and £70 depending on the subjectmatter and number of pictures. The most useful series is simply called Volumes, and there are currently 30 different themed titles in the set. Each volume contains 336 images, all of which are provided in just two resolutions – 72dpi 600k images for multimedia work and comping, and 300dpi 10Mb images for printing and design uses.

The image mixture on each CD is better than the Corel discs, but still leaves something to be desired. Each collection comes with an attractive, full-colour printed catalogue, with the largest thumbnails of all.



DEVELOPER	PUBLISHER	CONTACT	PRICE
Photodisc	Photodisc	0800 697622	£270

What the Photodisc collection lacks in subject matter, it more than makes up for in quantity.

7

Corel Mega Gallery

Although it previously produced two excellent collections of clip art, it's now been discontinued in favour of this single mammoth package containing 50,000 pieces of professionally-drawn vector clip art, and full-colour catalogue so you can select exactly the image you want.

Unfortunately, the groupings aren't always as straightforward as you might hope, and you can easily miss the right image because it's filed under the wrong category. There are also 60,000 photos stored at 340 x 200 resolution, which is the minimum you can get away with when home printing. There are also 1,000 fonts, 200 sounds and 100 video clips. In addition to the raw materials, there are a number of stand-alone programs, including Corel browser and a file conversion tool for producing the graphic format you need, which is just as well because all the clip art is provided in Corel's own proprietary CMX format.



DEVELOPER	PUBLISHER	CONTACT	PRICE
Corel	Channel Market	0171 468 3457	£495

Big marks lost for not supplying the clips or photos in an industry-standard format.

5

Masterclips 101,000



You can almost hear IMSI saying to Corel "Anything you can do, we can do better". This really is a simply astounding materials library. Spread across nine CDs, you'll find a staggering 101,000 pieces of raw material, comprising 33,000 bits of vector clip art in WMF format, 40,000 high resolution monochrome bitmap clip art images, 22,500 low res colour photo clips, 3,500 medium res (960 x 1,200) photos, 2,000 TrueType fonts, 500 sounds and 20 video clips. As if that wasn't enough, every single viewable file is printed in three hefty black and white catalogues, which are organised far more logically than Corel's.

All of these images are professionally created, and many are lifted piecemeal from sets which on their own retail for more than the asking price of this entire collection.



DEVELOPER	PUBLISHER	CONTACT	PRICE
IMSI	IMSI	0181 581 2000	£49.95

All the raw materials you'll ever need. An essential purchase for clip-aholics everywhere!

10

BREAKIN' THE LAW!

Of course, just because there's a picture on the Internet, it doesn't mean that the image is copyright-free. In fact, the opposite is almost always true. The Internet is an unregulated service, so people can, and often do, break every copyright law under the sun. If you plan to use the images for anything public, you'd be well-advised to stick with pictures from a known source.

Next month

A selection of over 100 clip art images and photos on CD REVIEW.



WINPROBE 95

DEVELOPER
Quarterdeck

SUPPLIER
Quarterdeck

CONTACT
01245 496699

PRICE
£49.95

MINIMUM SYSTEM

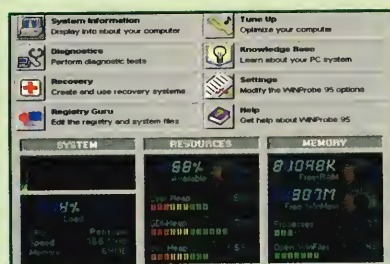
386DX, 8Mb, Windows

95, 14Mb hard disk

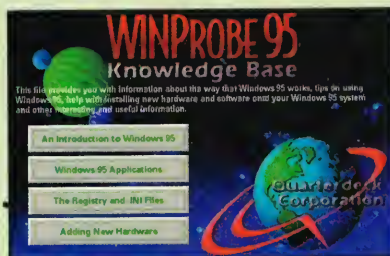
Although WinProbe is generally competent, it has been superseded.

6

PC REVIEW VERDICT



WinProbe looks very nice, but it totally overlooked 64 Mb of RAM in one test PC.



You can use WinProbe's Knowledge Base to understand more about your PC's workings.

PC CARE

DEVELOPER

American Megatrends

SUPPLIER

American Megatrends

CONTACT
01293 882316

PRICE
£39.95

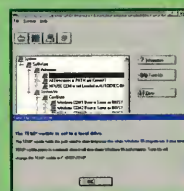
MINIMUM SYSTEM

386DX, 8Mb RAM,
Windows 95, 22.8Mb
hard disk space

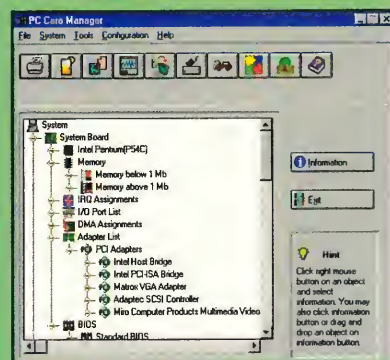
PC Care is a very powerful Windows 95 diagnostic program, with some great tune-up helpers.

7

PC REVIEW VERDICT



With its broad ranging Tune Up section, PC Care is clearly the better Windows 95 program.



PC Care isn't always capable of analysing certain PnP motherboard configurations.

AMIDIAG 5

DEVELOPER

American Megatrends

SUPPLIER

American Megatrends

CONTACT
01342 410410

PRICE
£126.90

MINIMUM SYSTEM

286, 512k, DOS 3

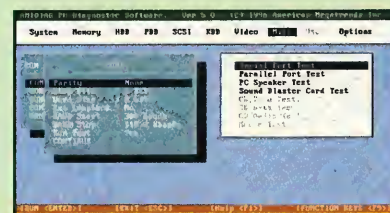
It's expensive, but if you want the right answer every time, AmiDiag is just the program.

8

PC REVIEW VERDICT



It looks very plain, but for accurate information, it has to be AmiDiag.



AmiDiag is the only one that can test the workings of your PC's various ports.

DIAGNOSTIC PROGRAMS

Get the info you need to keep your PC running at peak efficiency. This trio will keep your computer in tune.

Despite Microsoft's claims, it's a sad fact that since the arrival of Windows 95, PCs have actually become more complicated rather than easier to use. There are more intractable hardware conflicts and problems, when they arise, are harder to solve than ever before. There are many reasons for this, but the general lack of familiarity with Windows 95, Plug and Play (PnP) motherboards that fail to work as they should, and increased hardware complexity are the most common.

Experts left baffled

Even experts can be baffled, and the key to all solutions is accurate information. Information about the hardware in a machine, information about the resources available, information about your software, and how it's configured. Tune-up tips are all very well, but if you don't know what you've got to start with, how can you possibly hope to set it up optimally? That's where these programs come in. *PC Care* and *WinProbe 95* are both dedicated to Windows 95, whereas *AmiDiag 5* works with any PC operating system, but is most accurate under DOS.

We really liked the previous version of *WinProbe*, especially as it came with so much extra software, including *CD Certify* and a digital library of good reference titles. Those extras, however, have been dropped from the new version leaving us with a much lighter package. Even so, it's roughly comparable with *PC Care*. Both programs are aimed directly at home users rather than professionals. They have slick Windows interfaces, and everything's fairly easy to understand.

Feature for feature

Where the most important functions are concerned, you can find a direct equivalent in *PC Care* for every feature in *WinProbe*. Both have a system information mode that reports on the hardware in your machine and, ironically, both misreported the amount of RAM in our test machines. *PC Care* had

trouble on the 8Mb machine and *WinProbe* got it wrong on 128Mb machine. *PC Care* also crashed in information gathering mode. A readme file suggested that this was due to an old PnP motherboard, but the one on test was only six months old...

Detected and tested

The next logical step, having detected the hardware in a machine, is to test it, and again, both programs have diagnostic modes. These check that everything is working as it should, although there are limits to software-only tests, and that's where *AmiDiag* steps in. It comes with a couple of loop-back plugs. These are plugs that connect to your computer's external ports to check that they're working properly. Because *AmiDiag* is best run from a minimum DOS boot, you get a far purer and more accurate reflection of your machine's health because it's not encumbered by the clutter of Windows or any other misleading operating system. That's pretty much the extent of *AmiDiag* – it's no more or less, than a super-accurate system information and diagnostic program. It gives you all the information you could ever need, and doesn't crash when checking PnP motherboards. It handles SCSI devices, networks, PCI slots, Pentium processors, and everything in between.

The other two programs have a tune up mode which theoretically enables you to optimise your computer. In *WinProbe*, this amounts to little more than fine-tuning a few options and cleaning up the registry – nothing very earth-shattering. *PC Care* is more extensive, and it checks dozens of factors from the simplest software option to the most detailed BIOS setting. Some things it can configure automatically, while in other cases it can only point out the potential improvements, leaving you to do the work manually. This section is very useful indeed. For an accurate health check of your hardware, it has to be *AmiDiag*, but if you want something that takes your Windows 95 software into account too, then *PC Care* is very valuable. (MB)

There are more intractable hardware conflicts than ever before.

Music with a Mouse

So you think your computer sounds good...
Yamaha DB50XG or SW60

DB50XG

- 676 voices, 21 drum kits
- Waveblaster™ edge connector compatible
- 3 x 24bit effects processors
- 64 different effect types
- 32-note polyphonic
- CD-ROM included
- Dimensions (w x d x h): 139 x 89 x 15mm
- Weight: 65g



£129

Best New Hardware 1995 Award

"The board is so impressive, that we couldn't help but heap awards on it. A musician's wet dream - devastates every other Sound Card...just sell your grandmother or rob a bank...Do anything to get this card!" PCF

SW60

- 32 note polyphonic
- 676 voices, 21 drum kits
- 4Mb Wave ROM
- MPU 401 - compatible
- DSP effects processing - Reverb, chorus, variation and voice cancel modes
- Dimensions (w x d x h): 107 x 224 x 22mm
- Weight: 130g

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Roland are the cutting edge of desktop media, designers of the MPU401 Interface and inventors of GM/GS and the first music company to produce Daughterboards

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MUSIC SOFTWARE

Cakewalk Music Software Version 5



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Cakewalk Song Studio 5.0 CD-ROM	Windows 95 and Windows 3.1 x versions included	Entry level	£69
Cakewalk Home Studio 5.0 CD-ROM/3.5"	Windows 95 and Windows 3.1 x versions included	Entry level with notation printing	£99
Cakewalk Professional 5.0 CD-ROM/3.5"	Windows 95 and Windows 3.1 x versions included	Professional level with enhanced notation printing	£199
Cakewalk Pro Audio CD-ROM	Windows 95 and Windows 3.1 x versions included	Professional level with enhanced notation printing and unlimited audio tracks	£329
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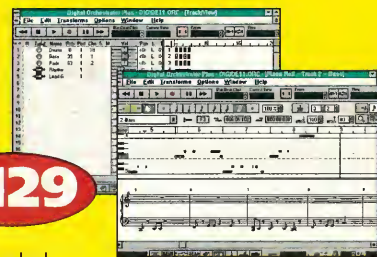


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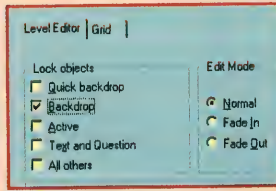
01827 311408



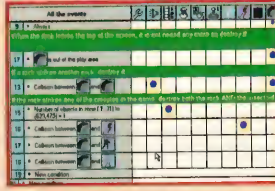
Ten step guide to creating a PC game



1 Having created a new project, the first order of business is a snazzy background. There are plenty to choose from on the CD; here an alien family has been chosen from the images on the left-hand side of the screen. The demo software features several backdrops.



2 The quality of images on this disc is quite spectacular – from ray-traced animated wasps to professionally-created backdrops. Before editing a game, it's best to call up the Preferences requester and lock the background, as here. This stops it being moved or selected inadvertently.



3 The Events Editor, where scripting is carried out. Little typing is needed as most options are just a mouse click away. Here the script is being built up of events which have global effects, or ones specific to game characters. A marker on a line signifies a condition.



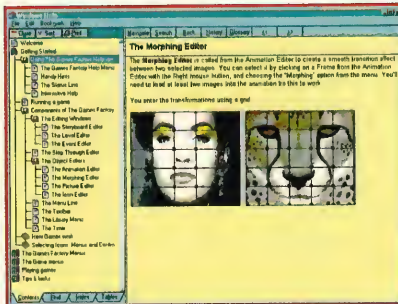
4 One of the game's bad-dies has been loaded from another set of pre-defined and animated characters. The next job is to make him move – he will animate automatically – and this needs the Movement options, chosen from this requester, after right-clicking the sprite.



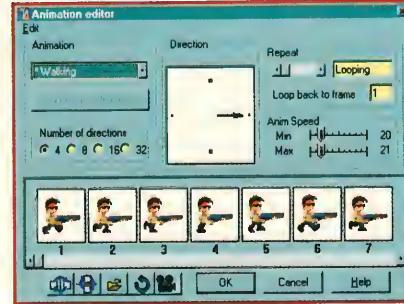
5 Using the mouse in free-hand mode, we've made a path for our insectoid to follow (The background has been removed to make it clear). By looping the path and reversing it at the end, you can create a fast-moving, random-looking path. Now you do this for the rest of the bad guys.



Morphing in progress; you select the source and destination images, then move the node points to create a smooth transition.



One of the finest help systems you could ask for. The manual has a lousy index, so this on-line assistance is invaluable.



Using the Animation Editor you can edit the cells of an animated character – changing the direction they face, for example.

GAMES FACTORY

CD REVIEW

On the coverdisc you'll find a working demo of Games Factory.

Anyone can program a computer game. No, really - it's a doddle. All it takes is an idea, a couple hours of practice and some logic skills. Oh... and the Games Factory.

How many of us have shelled out for a program after seeing a flash picture on the box cover and reading some ad-man's fantasy on the back? We've all been there, done that, thrown the pile of junk away.

So when a product is described as "undeniably the most comprehensive game creation tool ever developed" and claims "This is where your imagination becomes reality!", it's time for a reality check. Well, we checked, and it's real enough.

The *Games Factory* from Europress is a one-stop-shop on the road to games creation. It has everything you need in the way of sounds, images, animations and routines to get you building programs in a few hours.

On the level

Every game you create is made up of sections, or levels, which begin life on the Storyboard Editor. After deciding on the size

of your playing area in Storyboard, the serious business of actual game creation begins with the Level Editor. This is the blank page where you will build your masterpiece. In effect it's a window onto your gaming surface, allowing positioning of elements such as sprites, background images, platforms... in fact all the game's objects, from laser-bolts to score totals.

From here you can access the many libraries of characters, images and animations which pack the CD. But despite the range, there is bound to come a time when your games develop a certain 'sameness' – after all, how many ways are there to integrate a flying wasp into the action?

Pieces of the action

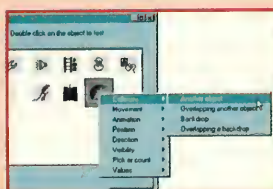
Which is where the *Games Factory* really scores, because you can create your own moving sprites in the Animation editor, and

load in and edit your own graphics. And even if you're not that hot an artist, it's just as easy to edit the ones which come with the software, and put your own stamp of individuality on them.

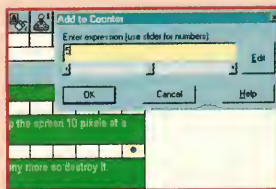
Most programming actions are called up with a right-mouse click, and constructing the skeleton of a game is usually just a matter of loading in the images, then pointing and clicking. For example, to test for a collision between two objects – a bullet and a victim, say – all you need to do is click on each image from a menu, with Collision as the detection option. What happens to either sprite after that is also just a matter of clicking in the appropriate box and determining an action – which will usually be Destroy.

To weaken an enemy gradually, you would set up a counter in the Event Editor to track the number of hits, then destroy it when it reaches a pre-set level. Setting Flags and

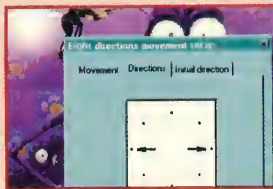
"This is where your imagination becomes reality!" It's time for a reality check. Well, we checked, and it's real enough.



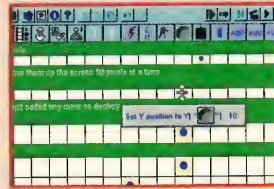
6 The method of testing for collisions is really elegant. There's no worrying about co-ordinates or colour detection – you simply choose an object, then tell the Games Factory to test for a collision with another. Then all you need do is decide on the outcome of that action.



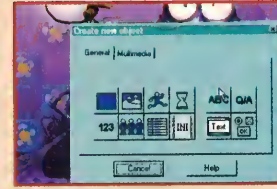
7 This being a simple game and only having a handful of meanies, the object is to waste the insectoids as quickly as possible, so we've used a counter which increases as the game continues. Here we're editing the start values and how far the bar moves each second.



8 To give the player an edge, a double-barrel tank has been loaded as the weapon of choice from the demo CD. It will be controlled horizontally by the cursor keys. The missile – a small rock – has been placed on the playing surface to make it accessible to the program.



9 A quick view of the script in progress, showing how each character has been given its own edit line. The markers under the various insects destroy them if the laser makes contact. All this is done easily, without any of the IF THEN palaver of ordinary programming.



10 Adding a text object to the screen is simple, and you can use any Windows 95 font in any colour and size you like. Once written, text can be moved as an object and positioned anywhere. A start button has also been added to allow the player to begin playing at leisure.



Multimedia outings are easy too; here's part of a History of Space program we made using click and point actions and MPEG videos.



Editing a multi scrolling game with loaded objects to the right of the screen ready to use.



Professional-looking platform games like this are well within the reach of most users after a while. Care has to be taken in programming the baddies, though, to ensure they don't fall off the end of a ledge!

Counters is well handled, managing to hide the actual programming which is going on as the game is created.

Moving computer-controlled characters around the game area is a dream. They can be made to follow pre-defined paths, which can be hand-drawn or programmed, or given a kind of artificial intelligence to either track down the opponent, or flee from it.

Movement of the player's character is a breeze, using either keyboard, mouse or joystick. And there's no need to worry too much about X Y co-ordinates or screen refresh, it just happens – in glorious animation too!

Multi-scrolling mastery

As well as the standard single-screen games users are most likely to begin with, the Games Factory offers multi-scrolling capabilities. This proved a tad slow on a P100 in 16m colours, but workable, and once the technique is understood it's achievable after a couple of days' learning.

Platforms, too, are easily created and managed, along with an object's gravity and

opacity. Sprites can be re-sized on the fly to give the illusion they are coming 'out' of the screen at you, and sound effects can be attached to most events.

While the essential structure of the game is handled in this fun and intuitive way, to achieve more sophisticated actions you need to understand both the scope and complexity of the software.

From time to time you do have to type in parameters. It can hardly be called code as such, but some goals will need the kind of analytical approach which programmers have. A kind of mental IF THEN ELSE attitude. It's fun to experiment, but it pays dividends if you plan ahead first.

The inclusion of a step-through editor is a great asset in testing (or debugging, to use the programming term) your work. It moves through one event at a time, allowing you to make speedy alterations.

Support for MIDI and WAV files is included, along with most graphic file types plus AVI, QuickTime, MPG and FLI movie formats. You can also create your own mini-animation

by using the program's built-in morphing function, which is stunning for upgrading spaceships, say, or turning a human character into a beast.

The help files are vast and cleverly tailored to get over most obstacles. The manual is comprehensive but superficial in places, and the demo games and professional-quality code which accompanies the package are useful guides for working through more advanced techniques.

Publisher Europress has pitched the Games Factory as the middle ground in its software creation suite: *Klik and Play*, priced at £44.99, is the entry level product, with Corel *Click & Create* as the high-end multimedia giant at £580.

On a final note, while you can freely distribute your own creations to friends and family, you are expressly prohibited from making any financial gain out of them or distributing them as shareware. To do this you need to buy Corel *Click & Create*, which will import Games Factory games and includes a licence to sell your own efforts. (PL)

DEVELOPER
Europress
PUBLISHER
Europress
CONTACT
01625 859333
PRICE
£69.99
MINIMUM SYSTEM
486 8Mb RAM, CD ROM drive, Windows 3.1 or 95, sound card.

PC REVIEW VERDICT
Fun and easy to use, and packed with potential – and game-authoring skills straight out of the box.



3D OR NOT 3D

DIRECT WHAT?
You've probably heard the expression 'Direct X' being used a lot over the last year. It's the umbrella term for a new set of protocols developed by Microsoft which ensures that under Windows 95, all new hardware will work with the latest software. In the past, there have been different standards for sound, graphics and so on. For instance Sound Blaster, Ultrasound, etc. Direct X acts as a universal translator, so that new products will all respond to the same sets of software instructions, even though the specifics and quality of the responses may vary. This simplifies things for software developers, and prevents the appearance of further incompatible hardware standards. The most common Direct modules are Direct 3D, Direct Draw, Direct Sound and Direct Input. Now you know.

Don't spend hundreds of pounds on a Playstation, Your PC can do far more with one of these amazing 3D accelerators.

Only one short year ago, we were looking on with interest as Diamond and Creative Labs released the first dedicated 3D cards for the PC market. Since then, just about everyone's gone 3D crazy, and there are at least a dozen all-powerful graphics cards to choose from. The early attempts were very disappointing, but the newer cards have been far more promising, and the Matrox Mystique is the current king of the castle.

Blast not from the past

Most manufacturers have only produced one card, but Creative have just released a new version of their 3D Blaster. The first version was a VESA local bus card. This was only because at that time there were still plenty of 486 machines with VESA motherboards around, as well as a few Pentiums. Their new card is PCI, which makes it a much better choice for today's Pentium PCs. And, of course, the faster bus enables far more impressive graphics performance.

The board is a combined graphics card and 3D accelerator, so it replaces your current graphics card entirely. Hurrah. Furthermore, it comes with a hefty 4Mb of RAM onboard, enabling you to push your Windows applications up to the higher resolutions, which in this case is 1280x1024 in 64,000 colours. Other 4Mb cards can do 1600x1200, but on the 3D Blaster 1Mb of memory is reserved exclusively for texture

mapping. Not to worry though, unless you have a really big monitor, you're never going to need the highest resolution. The card uses a Rendition Verite V1000 chip for 3D acceleration. For raw polygon drawing, it yields performance approximately 10 per cent faster than the Mystique. On the other hand, when you come to the clever stuff like filling and shading, it's performance is at least 30 per cent worse.

If speed is your sole objective (and with a 3D card it's certainly important), you should take a close look at the Righteous 3D from Orchid. It's their first foray into the 3D market, and by taking their time, they've really got it spot on. Unlike most modern cards, Righteous is not a combined graphics card - you use it in addition to your graphics card, not instead of it.

That means another PCI slot must be occupied on your motherboard, but it also means that if you already own a hot graphics card you don't have to sacrifice it for good 3D performance. The card is really very easy to install and, rather than connecting to your current graphics card using a slow internal VESA lead, the two are linked externally using a fly-lead and your monitor connects to the 3D card.

Meeting Mr Righteous

In our tests, Righteous 3D was so eye-poppingly impressive that we had to treble-check the figures just to make sure

that they were accurate. Its polygon rendering is more than 40 per cent faster than the next speediest card on the market, but unlike the 3D Blaster, that performance is consistent across the board. In fact, in some areas, it's as much as four times faster than the next best card in town.

The final ingredient

Both cards support Microsoft's Direct 3D, so enhanced 3D games such as *Mech Warrior*, *Final Doom* and *Descent 2* will naturally get enhanced performance from them. While the cards don't provide faster gameplay, they do enable a much greater level of detail in the games by, for instance, giving them realistic lighting, higher resolution textures, accurate perspective fills and so on.

So you can see just what a good investment you've made with your new card, each of the ones investigated here comes with a selection of games to get you started. With the 3D Blaster, there's *Rebel Moon*, *Flight Unlimited*, *Quake* (which, quite frankly, doesn't look much more impressive, just blurrier), and the early Playstation hit *Battle Arena Toshinden SE*. With Righteous 3D you get even more games. Its package includes *Mech Warrior 2*, *Descent 2* (very impressive), *VR Soccer*, *Whiplash 3D*, *Scorched Planet*, *Hellbender* and *Monster Truck Madness*. You also get some excellent demos with the latter card. This, and its great performance, makes the Righteous 3D the winner here. (MB)

In our tests, Righteous 3D was so eye-poppingly impressive we had to treble-check the figures just to make sure they were accurate.

RIGHTEOUS 3D



DEVELOPER	PUBLISHER	CONTACT	PRICE
Orchid	Orchid	01480 496575	£286.70

Righteous 3D is a great 3D accelerator, and even better, you can use it with your existing graphics card.

8

3D BLASTER PCI



DEVELOPER	SUPPLIER	CONTACT	PRICE
Creative Labs	Creative Labs	01480 496575	£199

For raw polygon shifting, 3D Blaster is fine, but it doesn't look so great when you get to the clever stuff.

6



*It's here again! The
complete guide to every
game your PC will
play host to over the
coming year.*

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It's the legendary 1997 preview.**

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January issue on sale 20th December

BOOM BOXES

Good speakers add a new dimension to your computing activities. Come with us as we transport you to a world of stunning sound.

When you think about upgrading your computer, a few key areas seem to get all the attention; graphics board, sound card, perhaps a faster hard drive or some extra memory. But they're just internal components. The way that they interface with the real world is just as important. There are at least half a dozen superb sound cards available now, and even the entry level Sound Blaster 16 can produce great sound in the right hands. Software publishers have long been accustomed to treating the audio with as much respect as the graphics, but without a half-decent set of speakers, you're missing out on that entire dimension of your software.

Of course, it's not just about volume, in fact some of the better speakers don't produce as much power as cheaper models. It's about quality, but surprisingly enough, you don't have to pay the Earth to get something nice.

There are tons of speakers available for under £50, and some of them are perfectly serviceable provided you aren't too concerned about tone or volume. These are the sort of speakers that are commonly bundled with new computers, so we won't waste time looking at them. The purpose of this round-up is to look at speakers that can do justice to a good sound card.

Good tone is very important, but another feature which looks likely to matter increasingly in the future, is the stereo and 3D abilities of the speakers. Dolby is being incorporated into game soundtracks and multimedia titles, and to get the best from it, you'll need speakers that can cope. There are already several sets which 'spatialize' the sound. Using just two speakers, they manage to project sound into three dimensions, and you can expect to see more and more of this kind of thing in the future. (MB)

Does the Watts Peak Matter?

The **watts peak** figure denotes the highest output that a speaker produces during a measured period. This is often irrelevant as the figure is usually many times higher than the level the speakers can consistently handle without distortion. The figure to check is the **watts RMS**, which is a true indicator of a speaker's power.

SOUNDWAVE 1000 3D



If you're really concerned about power and bass, this is the best of the sets in this round up. It's a complete speaker system comprising two small satellites and a massive sub-woofer. All of the box photos show the sub-woofer in place on the desk, rather than on the floor where most sub-woofers are placed. It's really far too big for desk use, but because it contains all of the volume, balance and tone controls, you need to keep it handy, which is something of a design flaw.

What isn't a design flaw is the huge, thumping, exciting sound that the system's capable of. Despite their small size, the satellites easily handle the high end, whilst the sub-woofer provides room-shaking bass. It also features a 3D switch, but rather than adding dimension to the sound like Labtec's Spatializer, it simply adds resonance (echo). Incidentally, this is the only system that includes a balance control, enabling you to alter the stereo position of the sound.

DEVELOPER	SUPPLIER	CONTACT	PRICE
Trust	Aashima	01376 501146	£99.99

It's a fantastic all-round system and at this price it's exceedingly good value.



LABTEC LCS-1022



In the past, Labtec was a manufacturer we associated with budget prices and budget performance, but if the speakers in this round-up are anything to go by, they've really come of age. Despite the fact that these speakers apparently feature a "space saver design", they're among the biggest of those we tested. Fortunately, most of that size is vertical height rather than base area, so they won't be occupying excessive amounts of desk space. The advantage of this size, is a more powerful sound and more resonant and effective bass.

They have a total output of 10 watts, which is slightly less than the ACS51s. However, don't become obsessed by the numbers, because these speakers have a far bigger sound than these figures suggest. The 'sensitivity' of speakers is as important as the power they can handle. These have a frequency response that drops way down to 45Hz, and this produces a nice clean, thuddy bass with no trace of distortion.

DEVELOPER	SUPPLIER	CONTACT	PRICE
Labtec	Labtec	01252 62900	£69.95

Very good all-round sound with plenty of punch and positive, undistorted bass.





YAMAHA YST-MSW10

One thing that most people want out of their speaker systems is decent bass, yet it's the part of the audio spectrum that most are least well equipped to deliver.

That's where a sub-woofer such as this one comes into the picture. Its frequency range is far narrower than the other speakers, but it starts way down at only 35Hz, so it can reproduce the lowest earthquake rumble! On its own, a sub-woofer sounds like nothing, but hooked up to your home hi-fi, or a set of multimedia speakers such as the ACS51s or the LCS-1022s, it adds a great deal of punch to the sound, and transforms the bass into a growl that can be felt more than heard.

This speaker has its own volume dial, as well as a high-cut button for eliminating unwanted higher frequency tones. The unit is

fairly hefty, and should ideally be placed on the floor.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Yamaha	Et Cetera	01706 228039	£119

An effective way to add bass presence to your computer and hi-fi audio.



LABTEC LCS-3210

Like the 1022s, these Labtec speakers are unusually tall. However, unlike the other set, they are also extremely deep, resulting in a very large resonating chamber which is used to produce an exceptionally warm and full-bodied sound.

They have a total output of 20 watts, which is quite enough to reach the pain threshold! However, the sound starts to fall apart long before that, with quite unpleasant distortion just above a comfortable listening volume. For home use, they're fine, but for noisier environments, they don't hold up particularly well.

Controls include a master volume, as well as treble and bass knobs. Click the Spatializer button and you can actually feel the sound focus moving backwards past your head, resulting in impressive 3D placement that adds to the richness of any audio from subtle classical solos to tortured heavy metal thrash.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Labtec	Labtec	01252 62900	£69.95

Lovely rich tone, but serious distortion if you want to play them very loud.



ALTEC ACS-51

At £58, the ACS51s are Altec Lansing's entry level multimedia speakers, which tells you something about the standards they work to. Some people might describe the cases as "traditional", but to us they're just plain ugly.

But they perform better than they look. At lower volumes they provide gorgeous, rich sound right across the spectrum, aided at the low end by a special Phantom bass circuit, and at the high end by adjustable treble controls. But long before you reach half volume the bass gets very wet and uncomfortable, although the mid- and high-frequency tones just go from strength to strength. The total output is 12 watts, with a frequency range of 80Hz to 18KHz.

Both the treble control and volume dial simultaneously adjust left and right speakers. As you'd expect, the ACS51s are magnetically shielded, so they're safe to place beside your monitor.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Altec Lansing	Vernon Computers	0171 720 7000	£58

Crisp mid- and high-range tones make these more suited to multimedia than games or music.

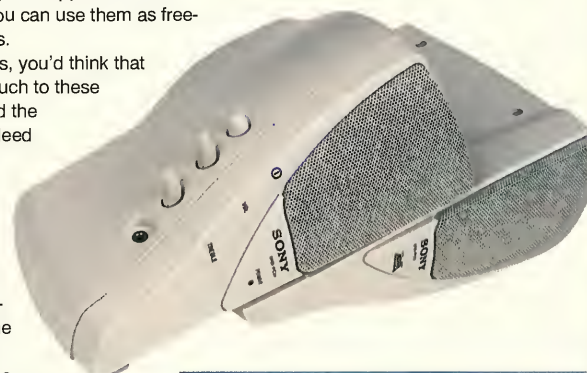


SONY SRSPC51

If we were going by looks alone, this attractive set of speakers from Sony would win hands down. Their elegant, futuristic, slim-line design makes them perfect for mounting on the side of your monitor using the supplied bracket. Alternately, you can use them as free-standing units.

At 5 watts, you'd think that there's not much to these speakers, and the cracks do indeed start to show long before you reach maximum volume. Although the bass frequency range is the same as the ACS51s, these cope with it far better, especially as you turn the volume up. They also have a greater range at the top end. Having said all that, the overall quality is worse than the Altec Lansing speakers.

There are discreet combined volume and treble controls, and like the ACS51s, there's a socket for plugging in a sub-woofer speaker if you want to improve the bass presence.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Sony	Sony	0181 7600500	£64.63

They look futuristic, and the bass isn't too shabby, but overall sound quality is the lowest of all.



SPEED DEMONS

Will CD-ROM drives ever stop getting faster? Not if these little beauties are anything to go by. We test the latest and fastest...

Six months ago, the consensus among hardware manufacturers was that CD-ROM drives had got as fast as they were ever going to get. With the replacement Digital Video Disc format just around the corner, and major mechanical issues involved in going beyond eight speed, it really seemed logical that the major players would sit on their hands for a while and reap the rewards of all that R&D money. A few players have dropped off the market altogether – it's just too fast moving and too competitive. Of the ones remaining, very few release drives at every speed bracket – only Aztech springs to mind. Most prefer to move up the speed ladder, dropping old models as they go. The highest rung at the moment, then, is the 12-speed.

New technologies are emerging, as they always do, and the very way that the CDs are read has altered in some cases. A few DVD players seeping on to the market now, but there are all kinds of problems related to their appearance, and even simple issues like the types of discs that the players will be able to read, and the forms of copy protection that will be used have marred the progress of the fledgling format.

Some pundits and manufacturers are now suggesting that it could still be a few years before DVD becomes a viable alternative to CD-ROM. PC REVIEW thinks it's likely to be much sooner, but right now, there's a whole bunch of speedy new CD-ROM drives for you to choose from. So read on. (MB)

DVD - WHAT NOW?

Although it'll be a while yet before DVD becomes a viable stand-alone alternative to CD-ROM, it's worth remembering that DVD drives have been designed to be backward compatible with existing CD drives. That means that in addition to the new 4.7Gb discs, DVD drives will be able to read conventional CDs as well.

Unfortunately, it will have trouble reading the current crop of writable CDs (gold disks) due to the shorter laser light wavelength required to read such high capacity medium. New writable media are being developed which should solve the problem but until then, if you have a lot of gold disks, don't sell your only CD-ROM to buy an AV drive!

ZETA 12X SPEED



The first drive in our round-up is an IDE model and comes from Aztech, a company which always leads the way in terms of affordability. They're usually among the first with higher speed releases, but in the past there have sometimes been compromises of quality to make the price bracket. This model performs quite admirably. It's still a touch below true twelve speed, although it's faster than the Teac drive. It also beats the Teac in terms of access time, with an average of only 153 milliseconds. Like its rival, it uses a CLV mechanism, which delivers an even data throughput right across the area of the disc.

The Zeta feels pleasantly robust, and Aztech seems to have overcome the vibration problems that were present in the 10 speed model. It features track skip, volume and eject controls on the front panel, and of course, there's a headphone socket for listening to audio CDs.

DEVELOPER	SUPPLIER	CONTACT	PRICE
Aztech	EZCD	01734 820840	£129.95

It's very affordable, yet the Zeta 12x Speed is superior to the Teac model in every way.



12 PLEX

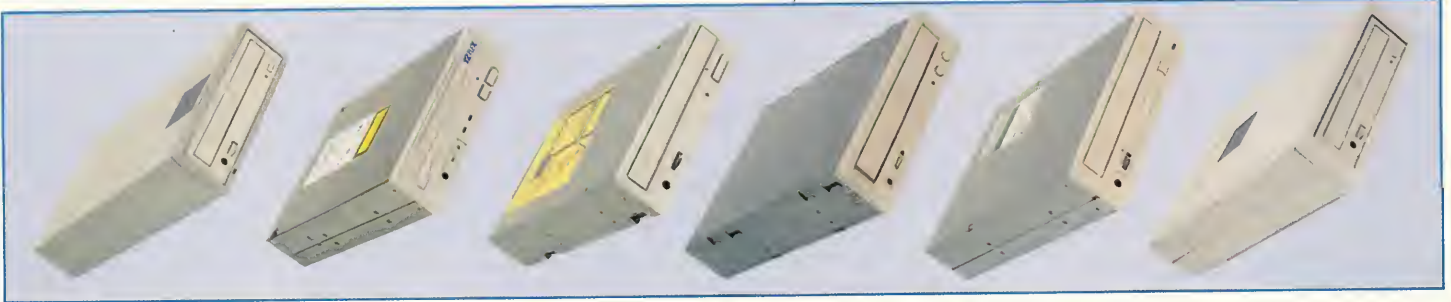


For no apparent reason, all SCSI devices cost more than their IDE counterparts, and this drive is certainly no exception. Perhaps it's because SCSI used to be the exclusive domain of professional users? Anyway, expensive it may be, but the 12Plex is a real beast of a drive. It manages a sustained transfer rate of more than 1839k per second, which is faster than many hard drives. In fact, it's the only drive that exceeds the manufacturer's quoted speed. Add to that a blistering access time of 130 milliseconds, and you can see how it's very easy to become attached to this little baby! The one fly in the ointment is the fact that it's a caddy-loading device. Plexor will tell you that this makes it more reliable, and point out that it enables you to mount the drive vertically. That might be true, but the bottom line is it's a pain in the butt to have to load all of your CDs into a caddy before inserting them into the drive. That grumble aside, it's a wonderful piece of kit.

DEVELOPER	SUPPLIER	CONTACT	PRICE
Plexor	Koch Media	01420 541884	£299.99

Very fast, very reliable, very flexible. But it doesn't come cheap. Delicious!

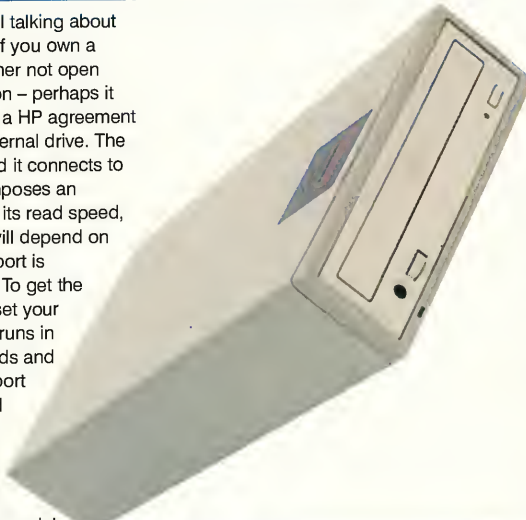




EZCD

Of course, it's all very well talking about fast CD-ROM drives, but if you own a portable PC, or you'd rather not open your case for some reason – perhaps it would break the terms of a HP agreement – then you'll need an external drive. The EZCD is such a beast and it connects to your parallel port. This imposes an immediate upper limit on its read speed, although the exact limit will depend on the way that the parallel port is configured in your BIOS. To get the best from it, you should set your parallel port up so that it runs in EPP mode. Older I/O cards and motherboards don't support this mode, so you should check before you buy unless you want to find yourself limited to single speed transfers forever.

This is the six speed model, although it actually runs about 50k per second slower than that. Nevertheless, a transfer time of 850k per second coupled with an average access time of only 179 milliseconds is very respectable as external devices go.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Amacom	Amacom	0181 810 7585	£233.83

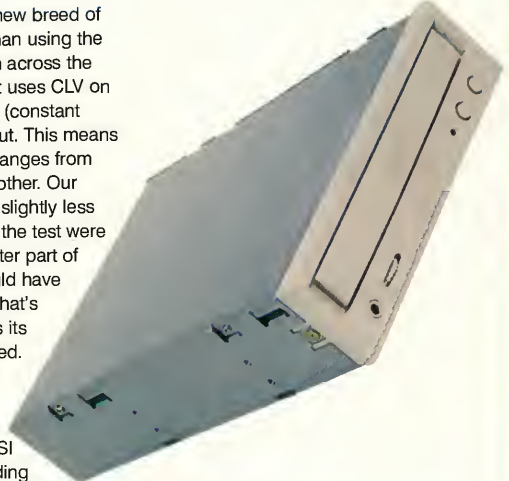
Not as cheap or easy to use as the internal drives, but robust and performs reasonably well.



PIONEER 10x

This drive is the first of a new breed of CD-ROM drives. Rather than using the same reading mechanism across the entire surface of the CD, it uses CLV on the inner tracks, and CAV (constant angular velocity) further out. This means that the transfer speed changes from one part of the disc to another. Our speed test shows it to be slightly less than true 10-speed, but if the test were only performed on the outer part of the CD, performance would have been far better. One fact that's completely unequivocal is its breath-taking access speed. At only 124 milliseconds, it's the fastest of the lot.

Better yet, although the Pioneer 10X is an SCSI device, it also uses a loading tray rather than a caddy, so it's far more convenient. The mechanism is a little noisy compared to the other drives, causing you to wonder whether the vibrations might become an issue with prolonged use. The price, however, is a little worrying compared to Aztech's.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Pioneer	Pioneer	01753 789731	£292.58

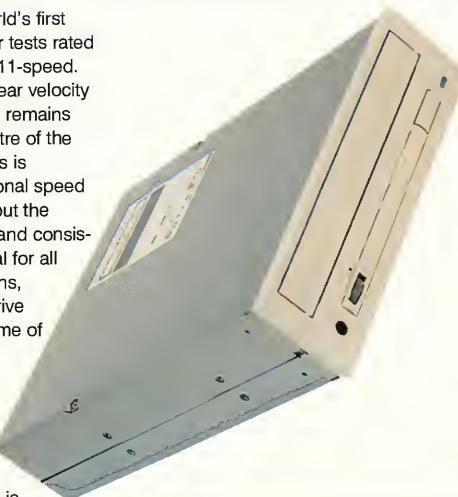
It's solid and speedy, but at this price and performance, there are far better alternatives.



CD-512E

Teac claims that this is the world's first true 12-speed drive. In fact our tests rated it nearer to what would be an 11-speed. Because it uses a constant linear velocity (CLV) mechanism, the transfer remains exactly the same from the centre of the disc, right out to the edge. This is achieved by varying the rotational speed of the CD. It's very technical, but the bottom line is a more reliable and consistent transfer rate, which is ideal for all kinds of multimedia applications, especially video replay. The drive also has an average access time of only 179 milliseconds, which again, is slightly higher than Teac's claim of 160. However, the combination is more than adequate for any games or multimedia applications.

Like the Aztech drive, this is an IDE device, so you can easily attach it to your existing IDE or EIDE interface. It also features a fast-eject, caddy loading mechanism, and there's a volume dial and jack socket so you can listen to audio CDs.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Teac	Teac	01734 820840	£129.95

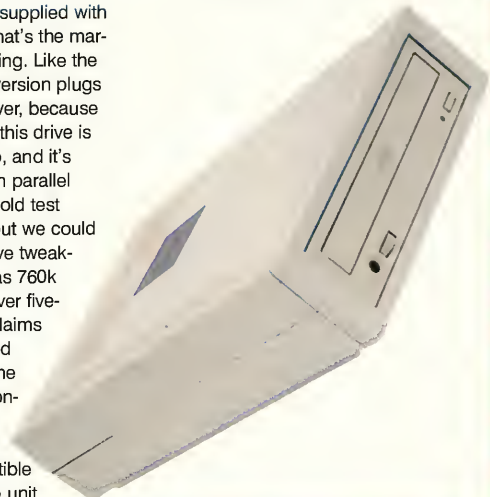
There's nothing wrong with the CD-512E, but there's nothing very inspirational about it either.



EZCD AUDIO 8x

Many portable PCs are not supplied with a built-in sound card, and that's the market that this device is targeting. Like the standard EZCD, the audio version plugs into the parallel port. However, because it uses a different interface, this drive is even more difficult to set up, and it's very unforgiving of unknown parallel port chip-sets. On our year old test machine, the best throughput we could manage, even after extensive tweaking of the BIOS settings, was 760k per second. That's a little over five-speed, although the drive claims to be capable of eight-speed performance. Its access time of 175 milliseconds is reasonably fast at least.

The drive has a built-in 16-bit Soundblaster compatible card, and at the back of the unit there are all kinds of sockets for you to attach it to your audio equipment or speakers. Any throughput problems also affect the audio quality, so unless your parallel port is performing well, you could run into problems.



DEVELOPER	SUPPLIER	CONTACT	PRICE
Amacom	Amacom	0181 810 7585	£316.08

If it works, this drive is great, but there's no way of knowing until you attach it to your PC.



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Is your PC making life a pain? Or perhaps you have a niggling query you'd like answered? Whatever the problem, there's only one solution: a letter to PC REVIEW's Q&A department.

WHAT THE DLL?

Q I want to clean up my hard drive, but how can I tell whether or not a DLL corresponds to any given applications I may have installed on my hard disk?
Stephen Appleton, Hove

A It can sometimes be useful to find out which DLLs (Dynamically Linked Libraries) are used by a particular Windows application. Find the application's .EXE file, and then right click on it and choose the Quick View option. (This can also be found in the File menu of an Explorer window.) A window will pop up which gives you all sorts of technical information about the program. The Import Table section lists the DLLs which are used by the application. This feature may be useful if you want to clean up unnecessary files, and you suspect a particular DLL is no longer needed.

Import Table

SHELL32.dll	
Ordinal	Function Name
0032	ShellAboutA
KERNEL32.dll	
Ordinal	Function Name
0171	GlobalUnlock
0160	GlobalAlloc
016d	GlobalReAlloc
016e	GlobalSize
0161	GlobalCompact
0167	GlobalFree
016b	GlobalLock
02c2	IsTrilenA
02b3	IstrcatA

The Quick View window lets you find out which DLLs are used by an application.

LIVING HAPPILY TOGETHER

Q I have a PC running MS-DOS 6.22 and Windows 3.1. I use it mainly for gaming, word processing, graphics, multimedia education and reference software. As more and more multimedia packages and games

become Windows 95-only, is it possible to do the following: 1) Purchase a second hard drive, add this to my computer as drive E:\ and install Windows 95 on it. 2) Having booted up using drive C:\ with DOS 6.22 and Windows 3.1, switch from hard drive to hard drive depending on which software I want to run? There are several bits and pieces of software which I use on a regular basis that are not Windows 95 compatible.

A You'll be pleased to know that you can arrange things on your PC so that you can run both your DOS and Windows 3.1 programs, and any new Windows 95 programs, but not quite in manner you suggest. When you install Windows 95, you can force it to preserve your old DOS/Windows 3.1 setup so that when you power up, you can choose to either boot the old operating system, or your new one.

Firstly, it's not necessary to buy a new hard disk just for Windows 95. A typical Windows 95 installation requires around 40Mb of disk space, so if you have enough free on your C:\ drive you can use that. Of course, you'll probably need extra space for your new Windows 95 applications, so if space is tight on your C:\ drive you might as well go ahead and get a new disk. Note that the convention is to have your second hard drive as drive D:\, and your CD-ROM as drive E:\. This will probably be set automatically by your PC's BIOS, but make sure that you change the CD-ROM drive letter if you explicitly set it when you load MSCDEX in your AUTOEXEC.BAT file (using the /L option).

The key to having dual-boot capability is to get Windows 95 to install itself into its own directory rather than overwriting your old Windows setup. The Windows 95 Setup program lets you specify a new directory name, such as WIN95, thus leaving your WINDOWS directory untouched. This new directory can be either on your C:\ drive or on your new hard disk. When you come to boot your machine, it will start with Windows 95, but pressing the [F8]

key when the 'Loading Windows 95' message appears will let you boot with your old DOS and Windows. (Pressing [F4] is an even quicker way to do this.) You won't be able to run your DOS/Windows 3.1-only programs at the same time as your Windows 95 programs, though. Your system can only be running either Windows 3.1 or Windows 95, not both at the same time, so choose the one you want to use when you boot up.

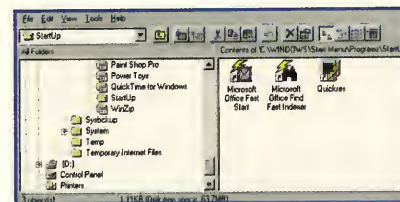
STARTUP SELECTION

Q Is there any way to temporarily prevent Windows 95 from running the programs in my StartUp folder? I know I can stop them loading by removing them, but sometimes I just want a quick, clean boot up without all the hassle.

Donny Taylor, Burford

A The StartUp folder, for those who don't know, contains programs which Windows 95 starts automatically when in boots up. This can be very useful when there are certain programs that you tend to routinely start just after booting up.

The usual way to add new startup programs is to make shortcuts to them, and place them in the StartUp folder which is in your Windows\Start Menu\Programs folder. To prevent Windows 95 starting these program automatically, simply hold down the [Ctrl] key while booting up. Easy.



Win95's StartUp folder: for shortcuts to programs you want to start automatically.

READER'S TIP

If you want your Windows 3.x PC to be more useful when it is inactive, rather than running a decorative screen saver, you can make it run a program. Load up the SYSTEM.INI file using Notepad, SysEdit or a similar editor. Find the line starting: SCRNSAVE . EXE= (it should be in the first section headed [boot]). Replace whatever follows it with the command line for the program you wish to run. Finally, restart Windows.

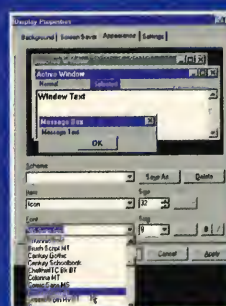
For example, if you want Microsoft AntiVirus to run and clean drive C:\, the line should read something like SCRNSAVE . EXE=C:\DOS\MAVAV . EXE C:\. To change the delay before the program starts, run Desktop from the Control Panel and change the delay as you would with a normal screen saver. The program you choose to run will run as normal, and therefore won't stop when the mouse is moved or a key is pressed. To stop the program once it's up and running, you have to close it in the normal way by, for example, using the control menu (the button at the top left of the window with a line in it).
Elyot Hoy, Saffron Walden

ICON FONT FIDDLING

Here's how you can personalise your Windows desktop by changing the font used for the labels on your icons. In Windows 3.x, the method involves editing your WIN.INI file, which you can find in the WINDOWS directory on your hard disk. Open the file using a text editor such as Notepad, or use Microsoft's SysEdit utility. Find the section which starts with the heading 'Desktop'. To change the font used for icon labels, add a line reading IconTitleFaceName= followed by the name

of the required font, such as Arial. A line reading IconTitleSize= lets you set the point size of the icon labels. You can also change the spacing of your icons by adding a line starting with IconSpacing=. For these changes to take effect you will have to restart Windows.

As usual, Windows 95 makes all this a lot easier. Simply go to the Control Panels folder and choose the Display



Win95's Display control panel can be used to change windows fonts.

control panel. Click on the Appearance tab. The Item list box contains a list of Windows 95 interface elements, including Icon. You can then pick the font you prefer from the list box. Additionally, you can specify the fonts used for window titles, menus, tool tips and practically everything else using this control panel. You can also change the icon spacing using the vertical and horizontal Icon Spacing options in the Item list.

READER'S TIP

Microsoft's so-called 'revolutionary' use of the right mouse button in Windows 95 to provide a pop-up menu soon becomes a tiresome way to get at the Properties window for a file. There are two handy methods to get this window up that are even quicker. The first is to select the file and then press the [Alt] key and the [Enter] key. The second method is to hold the [Alt] key and the double click on the file in question. This makes even more sense when you realise that pressing the [Enter] key has the same result as double clicking on a file.

Tony Skelton, Hull

READER'S TIP

If you have a Windows for Workgroups 3.11 system, make sure you are using the enhanced disk access options that were introduced with this version of Windows. Go to the Control Panel and choose the 386 Enhanced section. Then click the Virtual Memory button, and then the Change button. Check that the 32-bit file access option is enabled, and also that 32-bit disk access is selected, if your disk controller supports it. Also be sure to allocated a healthy chunk of RAM to serve as a disk cache.

MC Jones, Wolverhampton

A SECOND HARD DISK: CHANGING DRIVE LETTERS

TIP OF THE MONTH
Often, when people start to make serious use of their PCs they find they have no disk space left. Usually, Thanks to falling drive prices, the new hard disk is larger than the original. Wouldn't it be useful to use the large hard drive as your main C:\ drive and the older one as the D:\ drive? Or, you may wish to divide up the large disk into two partitions, C:\ and D:\, and have the second disk as drive E:\.

To juggle drive letters you need to know how your PC decides which hard disk gets which drive letter. With an IDE hard disk interface, which many PCs have, you can have up to two hard disks attached. One is known as the 'master' and the other as the 'slave'. When your PC starts up, the first partition on the master disk is given drive letter C:\, and the other partitions are allocated the other drive letters. Then the partitions on the slave drive are given



You can get your drive letters arranged just how you want them by changing the arrangement of your hard disks.

disk information automatically, you should be all right. Arrange the hard disks in your machine so that the disk you want to have drive C:\ on it is the master IDE disk, and make the other disk the slave.

subsequent drive letters in the same manner. If a disk has only one partition, then that partition will take up the whole disk.

If you plan to make a new C:\ drive, it's worth installing the new disk as the slave IDE drive and formatting it and copying your operating system over from your existing C:\ drive. This should mean that your PC will boot from the new disk when you swap the drives. The FDISK program supplied with DOS and Windows 95 is used to set up partitions on a disk, and to flag a particular partition as 'active'. You must have an active partition, for this is the partition from which the PC will boot up.

The BIOS setup program needs to know which disk is the master and which is the slave. If both disks are set to detect the disk information automatically, you should be all right. Arrange the hard disks in your machine so that the disk you want to have drive C:\ on it is the master IDE disk, and make the other disk the slave.

NEW ON THE MENU

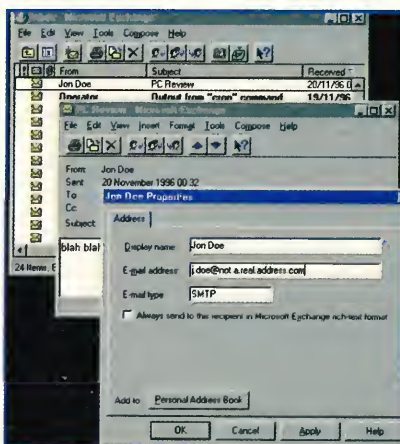
Windows 95 provides a neat shortcut for creating new, blank documents with the New option available from either the File menu or the right mouse button menu in a directory window. This is all very well and good, and represents a move towards more document-centric computing, but what do you do if you want to create a type of file that is not on the menu?

Carol Harkness, Arbroath

There are two ways to do this, the easiest being to get hold of the TweakUI control panel from Microsoft (check PC REVIEW cover CD for this, or download it from Microsoft's Web site at <http://www.microsoft.com>). The New tab in TweakUI lets you use any file to create a template for new documents, adding an entry to the New menu. So, for example, to add the ability to create a new PCX picture file from the New menu, start up Paint Shop Pro or a similar application, create a new, empty file and then save it. Drag the saved file into the TweakUI New section, and the job is done.

If you don't have TweakUI, then you can use the Windows 95 Registry Editor to add

items to the New menu. Start it up by running the REGEDIT program, either from the Run command on the Start Menu or by double clicking it in the Windows directory. Select the HKEY_CLASSES_ROOT item, and you'll see a list of file types – the extensions to filenames such as DOC or PCX. Select one of these file types (preferably one that you know has an application associated with it), and then choose New and then Key from the Edit menu. Rename the key so that it's called ShellNew. Select the ShellNew item, and then choose New and then String Value from the Edit menu. A new item will appear in the right hand side of the Registry Editor window. Close the Registry Editor, and the new file type will be in your New menu.



Double clicking on a name in Microsoft Exchange lets you find out the associated Internet email address.

EXCHANGING ADDRESSES

I've been using Microsoft Exchange's email facilities, but I can't seem to be able to find out the email addresses of people who send emails to me?

Raj Singh, Clapham

Microsoft's Exchange program is pretty good at sending and receiving email messages, especially if your Internet service provider supports both POP and SMTP protocols. However, in some respects its user interface leaves something to be desired. For

example, when you receive an email, Exchange only displays the name of the person that sent it, without any mention of the sender's Internet email address.

In fact, it is possible to find out more about any displayed name by simply double clicking on it. This displays a dialog box showing the name along with the email address, as well as the method by which the email message was transferred. In addition, you can double-click on an email address to get the same information box, but this is obviously less useful.

GET YOUR BACK UP

My PC has a 2Gb hard disk, and I use it to store a large number of files which are important to my business. I make backup copies of some of my files onto floppy disks, but this is somewhat impractical, especially if I ever come to backing up my whole hard disk. What are the best options for a cheap, reliable back-up solution for my system?

Dave Lee, Lincoln

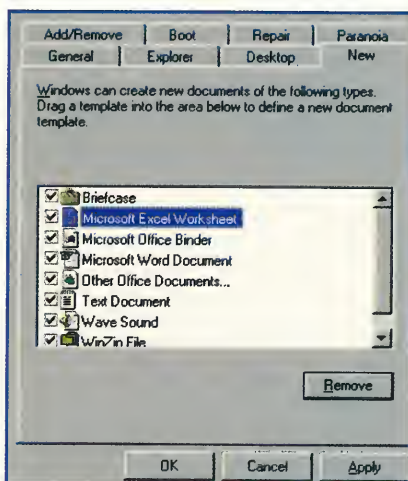
It is certainly very sensible to make backup copies of important data, and although it does sometimes seem to be too much bother, you'll certainly appreciate it if disaster should strike. Backing up to floppies is one of the cheapest methods available, but as you've found it soon gets tedious. Magnetic tape is a popular choice for backing up large volumes of data. You can buy tape drives for PCs from a

number of vendors. One



Backing up your hard disk onto tape can be the best solution to protect your data.

of the most cost effective systems around is the Ditto tape drive from Iomega. You can get between 1Gb or 2Gb of data onto one quarter-inch tape. An alternative is to backup onto 4mm



If you want to add file types to your Windows 95 New menu, the TweakUI control panel is the easiest method.

DAT (Digital Audio Tape), which can store up to 4Gb per tape. Look for drives from Hewlett-Packard, amongst others.

PENTIUM UPGRADE

Q I have a Gateway 2000 P75 with 24Mb RAM. I got *Formula One Grand Prix 2* at the weekend and playing the game in SVGA it runs very slowly. How can I speed this up? I have been told that my processor is not fast enough and I should upgrade to a P166. Is this true, and if so what chip should I buy and is it a job I can do myself?
Rudolph Beauchamp, Oxford

A It would be fair to say that a 75MHz Pentium system is fairly slow by today's standards, bearing in mind that most entry-level PCs are running at 100MHz. Upgrading your processor is certainly one way to improve performance. Intel makes a range called the OverDrive processors which are designed for upgrading older systems. The official upgrade path from a 75MHz Pentium is to a 125MHz Pentium OverDrive processor. You may be able to go higher if your motherboard allows you to set the CPU clock speed to higher than 75MHz, but you will have to check this out for your particular system. Intel tests the OverDrive processors with a wide range of systems, and since your PC is from a big manufacturer, a dealer should be able to tell you exactly which chip to get for your system. Fitting the new processor should be a job you can carry out yourself, especially if you're reasonably happy poking about with electronics. However, you should keep in mind the fact that it is very easy to damage your PC if you aren't careful, so if you have any doubts get a dealer to perform the upgrade for you.



Games will run faster if you upgrade a 75MHz Pentium system with this 125MHz Pentium OverDrive chip.

HOME NETWORK

Q I have two PCs at home, an old 486 running Windows for Workgroups 3.11 and a 200MHz Pentium Pro system running Windows 95. It would be nice if these were connected together in some way so that they could share files, and if I attach a printer to one PC I would like the other to be able to use it. How easy would it be to set up this kind of small network?
Mike Thomas, Stafford

A One of your best options is to buy a couple of Ethernet adapter cards for your computers and connect them up in a small home network. You can pick up a network card very inexpensively these days, some go for around £20, but it may be worth buying from a reputable manufacturer like 3Com. You'll need a fair amount of technical competence to get it all working, but if you're happy rummaging around inside your PCs and fiddling with software configurations then it will be well worth it. On

the software side of things, you can get Windows for Workgroups 3.11 and Windows 95 talking to each other using Microsoft's peer-to-peer networking. This enables you to share disks and printers between the two PCs. You could also try running TCP/IP, if you want to experiment with the Net or set up an intranet.

DISAPPEARING ACT

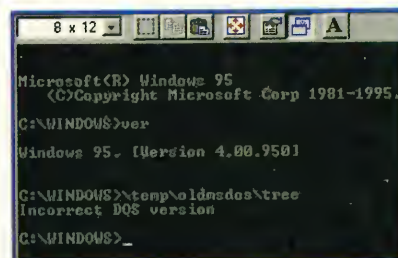
Q What happens to all the old startup files on my hard drive when I install Windows 95?
Steve Trosser, Newport

A When you install Windows 95 over your previous version of MS-DOS, it renames your old DOS startup files and replaces them with its own. This allows you to boot into Windows 95 normally, and into your old MS-DOS setup if you select it at startup time. Here's a handy run down of the changes that Windows 95 makes. All the following DOS files are renamed to have a .DOS extension: AUTOEXEC.BAT, CONFIG.SYS, COMMAND.COM, IO.SYS, MSDOS.SYS. The program MODE.COM is renamed MODE_DOS.COM. When you boot into your old version of MS-DOS, by pressing [F4] at startup time, the new Windows 95 files are renamed to have an extension of .W40, and your old DOS files are restored to having their original names. This means you can change both your Windows 95 and MS-DOS startup files, but you just have to work out which names they currently have.

OUT OF YOUR TREE?

Q Before I installed Windows 95 I clearly remember that when I typed TREE in MS-DOS I would get a display of my disk hierarchy. Now when I type it I get a message saying 'incorrect DOS version'. What is wrong?
Fred Rankin, Stockton-on-Tees

A The problem here is that many MS-DOS commands depend on the version of DOS you are running. Windows 95 comes with a new version of MS-DOS (call it version 7, if you like) which has new versions of many old MS-DOS commands. When you try to run your TREE command under Windows 95, it detects that you are not using the version of MS-DOS that it originally was to be used under, and so complains. Unfortunately, Windows 95 does not install a new version of the TREE command, so you'll have to do without it.

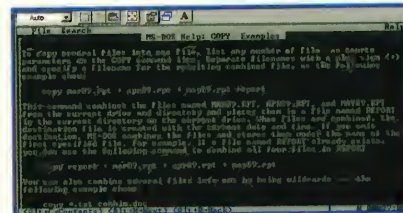


The 'Incorrect DOS version' error message means you're trying to use a command written specifically for a different version of MS-DOS than the one you're using.

COMBINING FILES

Q Is there a command that lets me combine two files, leaving me with one file consisting of the contents of the first, followed by the second?
Tiggs Williams, Lampeter

A The COPY command will do the job. Simply specify the files to combine, separated by [+] signs, as the first argument, and the name of the resulting total file as the second. For example: COPY FILE1.TXT+FILE2.TXT BIGFILE.TXT. There are a couple of options to specify whether you're combining binary or text files - check the on-line help in DOS-6 for more details on them.



The humble COPY command allows you to concentrate two or more files together to form one large file.

READER'S TIP

If you're thinking about buying a new modem, it's worth checking to see if the one you're considering can be upgraded in the future. Many modems can be upgraded to work at higher speeds simply by downloading a program which will install new software into the modem. Other modems require that you install a new chip, but even this can be much cheaper than buying a whole new modem. For example, some modems that currently can only run at 28.8kbps can be software upgraded so that they work at 33.6kbps. And as we all know too well, having a faster modem saves both time and money.
Trevor Barnes, Harrogate

GO FASTER DISKS

Disk drive speed is one of the key areas of your PC that can have a significant impact upon the performance of the machine as a whole. This includes your floppy drives, hard drives and CD-ROM drives. One important piece of software that you should always include in your MS-DOS setup is a disk caching program. Disk caching programs speed up access to disk drives and rely on the fact that your PC's memory is much faster to access than anything held in your disk drives.

Firstly, whenever a program reads from a disk, the caching software not only reads the data required by the program, but also copies the next few sectors on the disk into memory. This is called read-caching. If a program is reading a long, contiguous section of the disk, it will find that it can get at the next bit of data quickly because the caching software has already read it into memory. This is also one good reason to ensure that fragmentation of files on your disk is kept to minimum, by using programs like Microsoft's DEFRAG.

Secondly, when a program writes to a disk, the disk caching software will hold that data in memory until the disk is idle and the data can be written to it. Thus the program can carry on at full speed without waiting for all its disk writes to finish. This is called write-caching.

A disk caching program called SmartDrive is included with MS-DOS. To set it up, load it in your AUTOEXEC.BAT file with the command SMARTDRV. SmartDrive has a number of command line options that allow you to control exactly what kind of caching (read, write, or both) takes place on each of your disk drives.

READER'S TIP

When you open up an MS-DOS command prompt in Windows 3.x or Windows 95 it will either appear as a window on your desktop or will expand to take over your whole screen. There is an easy way to switch between these two options. Simply press the [Alt] key and the [Enter] key at the same time, and the MS-DOS applications will refuse to run in a Window, though, and will always fill your entire screen. Duck Johnson, Bromley

EXPLORER OPTIONS

Q When I start my Windows 95 machine, I'd like to have an Explorer window open up automatically for both my C:\ and D:\ hard disks. Is it immediately obvious how I can do this though? Is there some way to force Explorer onto a particular disk?

A Firstly you have to know that the Explorer window, and the normal desktop directory windows, are produced by a program called EXPLORER.EXE which can be found in your Windows directory. If you go to the Run option in your Start Menu and enter explorer and press [Enter]. You'll see a normal Explorer window appear.

The explorer command has a number of options you can add to it, though. To tell it where to start exploring, use the /e option, followed by a comma and then the directory you want it to start at. For example, to force Explorer to start on your D:\ drive, use the command: explorer /e,D:. The /e makes an Explorer window appear rather than a desktop directory window. Now you can create shortcuts to EXPLORER.EXE and add them to your Startup folder. You can specify the extra command line options by getting the shortcut's Properties window up, clicking on the Shortcut tab and adding options to the command line in the 'Target' box.

ANIMATED ACTION

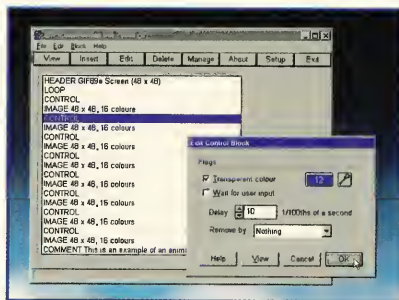
Q I've noticed that an increasing number of Web pages have animations scattered all over them. On examination of the HTML code for such a page, it seems that the animation is done with a single GIF file. Can you explain how I can make an animation with a GIF file, because all the GIF images I've ever made are static.

Dani Hill, Surrey

A The animated images you've been seeing on the Web take advantage of your Web browser's ability to display GIF89a animations.

The GIF89a standard allows you to create animations by storing multiple frames and control data in a single file. This is in addition to being able to hold a plain old static image. The whole file is downloaded to your PC, and then your Web browser displays each from of the animation in succession. You can arrange for the animation to play just once, or to loop around and repeat, and you can also vary the time for which each frame is displayed. The position of each frame within the animation can be controlled, so you can have a large background image and then move a smaller image around within it.

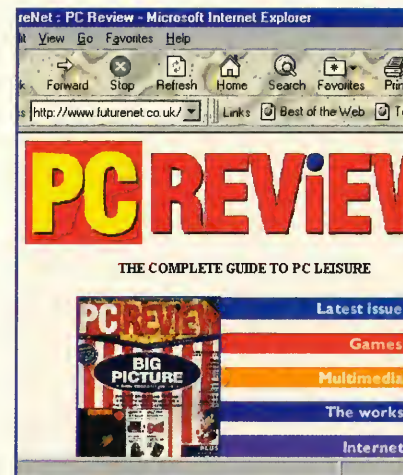
Probably the easiest way to create your own animated GIFs in Windows is to use a program such as GIF Construction Set. You can download this shareware utility on the Internet (try www.mindworkshop.com or www.shareware.com), and it's probably also available from shareware libraries. GIF Construction Set gives you a simple user interface in which you assemble a list of image frames and control blocks to construct your animation.



To create your own animated GIF files, use a program like GIF Construction Set.

REDECORATING INTERNET EXPLORER

Q Overall the user interface for Internet Explorer 3.0 is rather good. One thing I would like to do is change the background picture which goes behind all the buttons on the toolbar. Is it easy to remove or replace it? Quentin Davies, Hereford



Redecorate your Internet Explorer toolbars using Windows 95's Registry Editor.

A It's certainly very easy to remove the background image from the Explorer 3.0 toolbars. All you need to do is to pick Options from the View menu, click on the General tab and deselect the checkbox labelled 'Background Bitmap'. This will give you a plain grey background, which you'll find redraws itself somewhat faster than its decorated cousin.

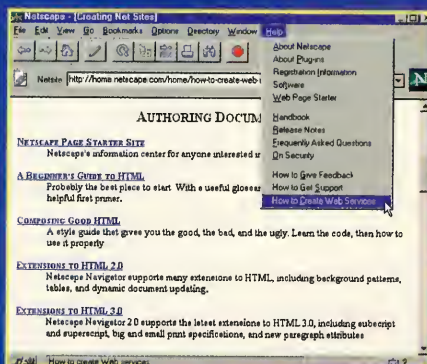
Actually changing what that background bitmap looks like, however, is more complex, but can be done with some help from the Registry Editor. First, turn off the background bitmap as described above, and close Explorer. Then open up the Registry Editor by double clicking the RegEdit program in your Windows folder. Open up the HKEY_CURRENT_USER item, followed by Software, then Microsoft, then Internet Explorer. Finally select the Toolbar item. You should see a value called BackBitmap. Double click it, and enter the full pathname to the bitmap image file you want to put into the Value box (this should be a file ending with .BMP). Now, start Internet Explorer again, and check that the Background Bitmap option is on. You should now see your newly redecorated toolbars. Hurrah.

OWN YOUR OWN WEB SITE



One decision you have to make about your Web site is whether you want others on the Internet to have access to it all the time.

Since you most likely do want to give people access to it 24-hours a day, your best option is to find an Internet service provider that will host your Web site for you. Many dial-up accounts these days come with some free Web space. This will allow you to set up a site which is stored on your ISP's machines,



Navigator's Help menu can set you on the path towards writing your own web pages.

giving the rest of the Internet access to your pages at any time.

You can, of course, experiment with running a Web site on your home machine, and there are many available servers for Windows 95 available (check out the Web servers section of Yahoo for some pointers). If you're using one of

these, others will be able to access your home Web site at any time as long as you are connected to your ISP.

Clearly this will only be for short periods of time, but it should give you some insight into running your own site.

Web pages are written using a language called HTML (Hypertext Markup Language). The HTML specifies the content of a page and how it is to be displayed by the browser. To write your own pages, you'll first need to get up to speed on HTML.

Fortunately, you'll find there are many useful sites on the Internet to help you with this. A good way to start is to simply select the option 'How to create Web services' from under Netscape Navigator's Help menu. There are also many books now available covering all aspects of the Internet and World Wide Web, including HTML tutorials.

You can write pages with any text editor, such as Notepad or WordPad, and then view the results of your efforts straight away with a Web browser. For more details on creating your own Web site see last issue's How to Create Your Own Web Page feature, or page 38 of this issue.

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Mannesmann Tally 80/81	3.90	3.75	3.55	3.35	Star LC200	9.78	9.63	9.43	9.03
NEC Pinwriter P2200/P2-	3.03	2.88	2.68	2.48	Star LC24 - 10/20/200	9.63	9.48	9.28	8.88
Okidata ML182/183/192/193/195	3.17	3.02	2.82	2.62	Star LC240C, LC24-30	9.20	9.05	8.85	8.45
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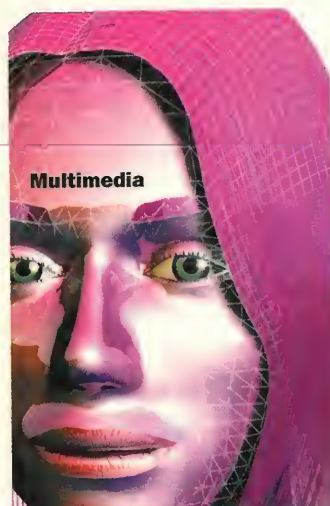
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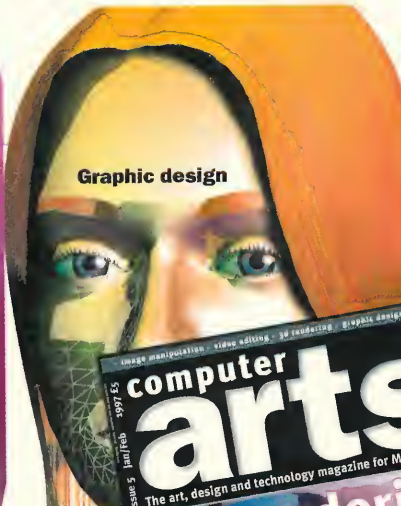
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S/MIME
<http://www.dem-ing.com>

Secure Email
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PGP
<http://www.symantec.com>

PGP Tools
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NEWSGROUPS FOR INFO
alt.security
comp.security
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YAHOO – search on 'encryption'

How to... KEEP A SECRET

If the truth is out there it's encrypted. You can secure your own privacy with the latest easy to use encryption programs.

Everyone wants a measure of privacy, but privacy in the digital age is impossible without encryption. It's impractical to lock up your files, have your email hand delivered by a trusted servant and uninstall your software before shutting down to stop people using it.

Practical encryption must be transparent – it should simply *work* – otherwise you won't use it at all. Oh no? So when did you last back up anything? Encryption must be simple to apply and impossible to break. It's not much to ask.

Fortunately, the PC, which makes files too easy to copy, send elsewhere or view also provides the computing power you need to protect your privacy.

Privacy is slightly different from security. No one is likely to be exposed to danger, or die, if strangers see letters to your doctor about intimate itching, the 45Mb of pictures showing women (or men) doing what comes naturally and the diary you keep updated with scurrilous gossip.

But allowing others access to those files can prove embarrassing, career-limiting or costly depending on who sees it and what it is they see.

You may also want to prevent access to games, Internet programs, or whole directories, perhaps providing a protected directory for each person who uses your PC. The ability to protect people's files from others makes a home PC a whole lot more attractive.

There are several approaches, each with its own pros and cons. For example, *Word* and most other professional-quality applications provide password protected encryption for files.

This is a relatively unsophisticated protection. There are many programs out there capable of breaking most application encrypted files in under a second – check out alt.hackers – but then the level of protection only needs to reflect the level of sensitivity. This free protection may be all you need.

A little more sophisticated is *PKZip*, which will compress and protect files. The Windows 95 shareware version is widely available. In fact, it's on CD REVIEW.

The starting point on the Web for more encryption related information and software.

Pretty Good Privacy

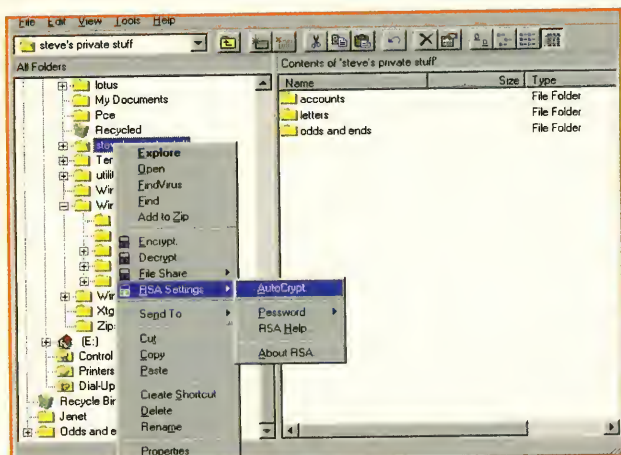
Philip Zimmerman's public key program *PGP* provides effectively unbreakable data protection. It's the de facto standard on the Internet. Unfortunately, it's DOS based, awkward and intrusive to use.

The commercial Windows version of *PGP* is sold by Viacrypt. However, there are a number of Windows front ends for *PGP* which effectively hide its DOS-based command line controls. We've put *PGP* up on our Web site. (See right sidebar.)

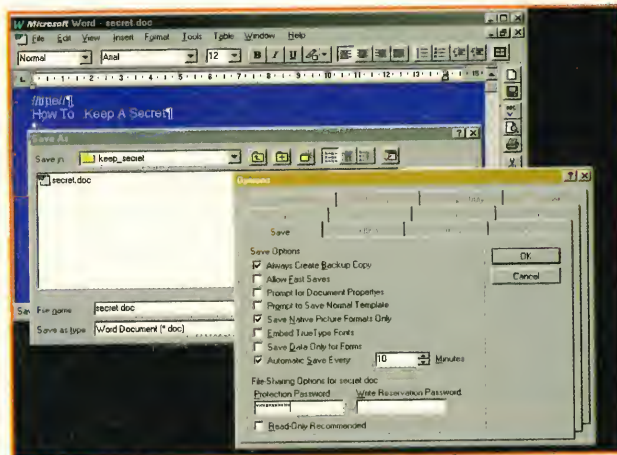
As a user you never want to do more than identify yourself using a password to access a file. When you send an email

the only thing you want to have to provide is the recipient's name. It ought to be enough to ensure private transmission. This is available using S/MIME (Secure Multipurpose Internet Mail Extension), which we've also put this on our site.

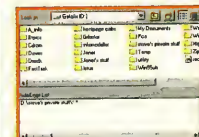
S/MIME is based on RSA's public key data encryption standard and works with any Internet mail application. It can encode your mail or simply provide proof of origin signatures for it. If nothing else it will change people's attitude to email, which is often regarded as slightly less secure than sending a fax.



PCSecure adds encryption options to your PC, including Explorer. It's simple to use them – essential for an encryption package.



Many applications, such as Word, can encrypt sensitive documents for you. However, the protection is fairly flimsy.



PCSecure asks for the directories you want added to your Autocrypt list. The whole simple process takes seconds.

A Rough Guide To Encryption

To encrypt a file you apply a set of transformations using the original data and a secret key. It's simple to apply but difficult to reverse without knowing the key.

The two main approaches are public and private key systems. In the latter you and the recipient both need the key. You use it to conceal the information and the recipient uses it to reveal it. This is great for local encryption but for moving data it's awkward because first you have to securely send the key – a different one to everyone you converse with.

Public key systems use a two-part key based on the difficulty of calculating factors of very large numbers. The public part is freely available – often from public key servers on the Internet – and anyone can use it to encrypt data to the person whose public key it is.

Now for the clever bit. The encryption process uses a 'trapdoor' function which only works readily one way. Knowing the public key doesn't help you decode the file or discover the secret half of the

key. Only the person with the matching secret half of the key can decode the message. Unlikely as it sounds it works well enough to worry real secret agents.

Public key encryption is computationally intensive and produces larger files, so as a result it's usually used with compression software and a private key scheme such as DES (Data Encryption Standard). The software generates a random DES key, uses it to encrypt the file and then uses the public key system to encrypt just the DES key.

When the file arrives the recipient uses his private half of the public key to unscramble the message. Behind the scenes the original encryption process is reversed.

Usefully, the same technology can be used to provide irrefutable digital signatures for documents – using your public key anyone can prove a digitally signed document could only have originated from you.

Unlike application software PKZip works with any files or groups of file. On the downside, it interferes with the normal use of your PC. You have to do extra things to make it work – and most of us are just too lazy.

There are even hardware encryption systems. Compaq's portable PCs, and others, have password protection of the hard drive built in. Unfortunately, if anything goes wrong with the machine you lose access to everything on the disk, and it does happen. There are even encrypting hard drive controllers available for desktop PCs.

Hardware solutions are fast and transparent, but require that the recipient of your messages has the same hardware. They also encrypt everything under one password.

This is more than any sensible home PC user wants. It isn't elegant.

The ideal solution is a program capable of encrypting the files or directories you feel are private but which enables you – and only you – to use them as if they were ordinary files or directories.

Naturally, such programs exist. Our favourite is RSA's PCSecure, a truly neat piece of software available for Windows 3.1, Windows 95 and even the Apple Mac. Under Win95 it adds new encryption options to the File menu of Explorer and folders as well as to the right button object menu.

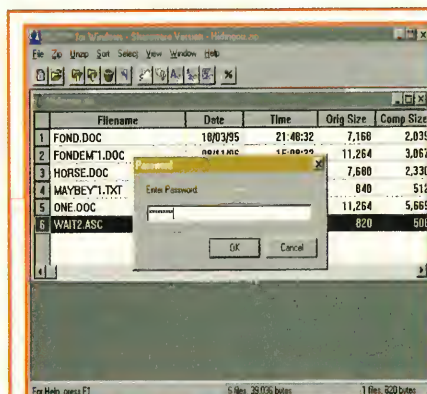
The ability to remember your password for a specified period of time means you can enter it once when you start your session on

the PC and then don't need to enter it again, provided you double click on files in Explorer to open them. If you want to open files from an application they have to be associated with the application or else you have to decrypt them first. For everyday use the Autocrypt feature is better. You specify the files and directories you want to work with and they're encrypted automatically when you close Windows 95. When you reboot you're asked for your Autocrypt password. If you provide it your files are all decrypted.

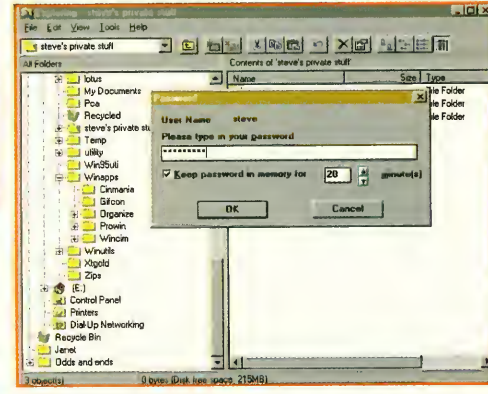
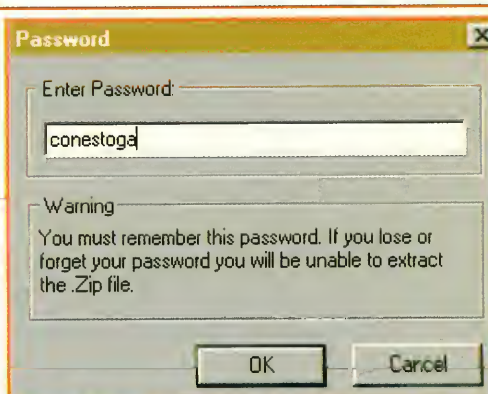
If you don't provide a password you can only access unencrypted files on the PC. The whole process adds just a few seconds to the boot up and shut down times. It's a truly elegant solution. (AC)

CD REVIEW

RSA's PCSecure is on our cover CD this month. You can also find links to the sites mentioned here via PC Review's Web site at this address: <http://futurenet.co.uk>



PKZip will encode and password-protect a zip file for you. It doesn't even make it bigger.



PCSecure asks for your password before enabling you to Autocrypt your personal directories.



How to...

BUY PC STUFF

AUCTION HANDBOOK

Potential auction goers might want to equip themselves with a copy of *The Computer Auction Handbook* from Carnell Ltd. The book costs £15 and is available by calling 01206 825600.

Alternatively, turn to our Freebies section on page 15 to find out how you might be able to get hold of one of these books for free with the help of PC REVIEW.



One way of getting things cheap is to move to America. But that's not always an option.

How does a brand new PC with £250 knocked off the price sound to you? Or how about a 21-inch monitor for the same discount? Read on, for the route to a bargain...

One very fine way of getting cheap PC gear is to log on to an on-line auction. These are often based in the US, but don't let that put you off. The best ones are run by companies which auction off goods direct from the manufacturer. You'll find all sorts for sale, from monitors to CD-ROM drives. The amounts and items vary from week to week. On-line auctions work like a conventional auction, except you don't physically go anywhere. Instead, the goods come to you. If your bid is high, enough, that is.

To get involved, you'll need register on-line, and give your credit card number. If you feel unsure about giving your credit details, most auctions let you phone or fax them. They'll then give you an ID code which you use to place bids. The bidding page will tell you much the minimum

bid is. Most auctions stretch over a week, fortnight or month. There are 'live' ones, but give the others a try first. The auction will email you if you win and then you'll need to sort out getting the goods to you. There is usually a list of shipping options.

Check whether they will ship direct to you, or just to the nearest British port. In the latter case, you'll have to pick up the cost of moving it from the port to you. Most auctions say goods will be delivered in five to ten days, that only applies to the U.S. Generally, the goods arrive here in anything from 14 to 30 days from the time you pay. Some are slower, some quicker, it all depends on the supplier. Are these auctions worth it?

We've got a mate, right...

Yes. In the past few months, friends of PC REVIEW have bought a 1200dpi colour scanner for less than £200 including VAT and shipping, a CD drive for £190, 3Gb hard drive for £97 and a 3D graphics card for £90. Prices vary, depending on how much kit is on offer and how many people are bidding.

Remember though, that prices and hardware vary widely. If you fancy looking like Lovejoy but without the antiques, then you could try bankruptcy and liquidation auctions.

At these you'll find loads of pristine kit at low prices. Businesses go bust no matter how the economy is doing. And when they go under they tend to leave creditors who want their cash quickly. Bankruptcy and liquidation auctions are organised to get rid of the company's assets. Items such as computers, printers, software and office equipment are all sold off. Few people know about these sales so there doesn't tend to be much bidding competition.

To find them, first check the *Yellow Pages*, look under Auctions and you should find at least one liquidating company. Write to them, enclosing a stamped addressed envelope, asking if they do a catalogue and mailing list. Most charge between £10 and £15 pounds for a year's worth of catalogues. They'll tell you where the next sale is, when it starts and if there is any viewing time.

Otherwise, check your local paper.



CHEAPER

Ten top tips on buying at PC auctions

- 1 Set an amount you're prepared to spend on an item and then stick to it. It'll save you loads of bother later on.
- 2 If you plan having a crack at on-line auctions, watch the exchange rate. You can find it in the newspapers. For importers the higher the pound against the dollar the better.
- 3 VAT is added to any computer equipment. So remember to add it on when you buy anything on-line. Customs and Excise keep a close watch on imported goods, and usually bill you accordingly.
- 4 Read the rules! Check the boring small print so you can sure what your rights are. All auctions produce them, even on-line ones. Most goods are sold as seen.
- 5 If you're buying from abroad, make sure you know the import restrictions for this country, you can get them from your local Customs and Excise office.
- 6 Visit an auction on-line or off-line at least once before spending anything, to get a feel for how the bidding works, an idea of what sort of kit they've got and what price its going for. Cheaper areas in the country for off-line auctions tend to be Yorkshire, East Anglia and parts of Scotland.
- 7 If you can, check that kit you're buying works okay. When buying new kit, try to make sure you can get a warranty for it. Remember, you'll often be making fast purchases with no recourse should anything go wrong with the equipment. Cover your back.
- 8 If you're buying at an on-line auction make sure you've plenty of room on your credit card. If you go over your limit, then the next highest bidder gets your goods. Likewise, take enough cash to an off-line auction, very few allow cheques or credit cards to be used by people they don't know.
- 9 At an off-line auction you bid for something by either raising your hand or your catalogue and waiting for the auctioneer to see you. Jumping up and down shouting "Me! Me! Me!" just marks you out as an amateur.
- 10 You'll be expected to pay about 25 per cent of the cost of your item as soon as you've 'won'. Make sure you have the cash. With on-line auctions, they debit the full amount plus shipping from your credit card.

ON-LINE AUCTION ADDRESSES:

On-Sale - <http://www.onsale.com>

CyberSale - <http://www.infopoint.com/auctions/cybersale>

CyberSwap - <http://www.cyberswap.com>

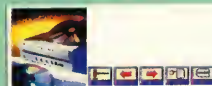
Auction PC - <http://www.auctionpc.com>



Minimum Bid £25.00
Buy Increment: \$0.50
Quantity Available: 12
Auction # 12174
Auction closes at 11:00 AM Mon Nov 25, 1996 12:23 pm PST
Sales Final - Auction Auction225
Last Bid occurred at Sun Nov 24, 1996 12:15 pm PST

The current high bidder is:
1. B. of America, Inc. Bid Price: \$2,947.00 (201.00) 1. "My new printer"
2. C. of America, Inc. Bid Price: \$2,947.00 (201.00) 2. "My new printer"
3. D. of America, Inc. Bid Price: \$2,947.00 (201.00) 3. "My new printer"
4. E. of America, Inc. Bid Price: \$2,947.00 (201.00) 4. "My new printer"
5. F. of America, Inc. Bid Price: \$2,947.00 (201.00) 5. "My new printer"
6. G. of America, Inc. Bid Price: \$2,947.00 (201.00) 6. "My new printer"
7. H. of America, Inc. Bid Price: \$2,947.00 (201.00) 7. "My new printer"
8. I. of America, Inc. Bid Price: \$2,947.00 (201.00) 8. "My new printer"
9. J. of America, Inc. Bid Price: \$2,947.00 (201.00) 9. "My new printer"
10. K. of America, Inc. Bid Price: \$2,947.00 (201.00) 10. "My new printer"

Fancy this printer? Then make a bid.



Minimum Bid \$5.00
Buy Increment: \$0.50
Quantity Available: 11
Auction # 20902
Auction closes at 11:00 AM Mon Nov 25, 1996 11:11 pm PST
Sales Final - Auction Auction225
Last Bid occurred at Sun Nov 24, 1996 11:01 pm PST

The current high bidder is:
1. B. of America, Inc. Bid Price: \$5.00 (201.00) 1. "My new CD-ROM drive"
2. C. of America, Inc. Bid Price: \$5.00 (201.00) 2. "My new CD-ROM drive"
3. D. of America, Inc. Bid Price: \$5.00 (201.00) 3. "My new CD-ROM drive"
4. E. of America, Inc. Bid Price: \$5.00 (201.00) 4. "My new CD-ROM drive"
5. F. of America, Inc. Bid Price: \$5.00 (201.00) 5. "My new CD-ROM drive"
6. G. of America, Inc. Bid Price: \$5.00 (201.00) 6. "My new CD-ROM drive"
7. H. of America, Inc. Bid Price: \$5.00 (201.00) 7. "My new CD-ROM drive"
8. I. of America, Inc. Bid Price: \$5.00 (201.00) 8. "My new CD-ROM drive"
9. J. of America, Inc. Bid Price: \$5.00 (201.00) 9. "My new CD-ROM drive"
10. K. of America, Inc. Bid Price: \$5.00 (201.00) 10. "My new CD-ROM drive"

Or how about this CD-ROM drive?

Some auctions don't produce a catalogue, instead they publish a list of goods in the local rag, together with all the other details you need. Keep your eyes peeled.

You'll find all sorts at these sales, not just computer kit. What you discover depends on where you live. Most sales are held at the premises of the company that has gone bust. So you'll probably find some kit still plugged in, or in its original wrapping complete with warranty. If the auction is liquidating a computer shop there's bound to be loads of games.

Here's an idea of what you can get from a bankruptcy auction, with prices taken from auctions held in the past few months. A 2Gb hard drive for £20. A copy of 3D Studio Max at £310. And a 21-inch monitor £165. These prices are only guidelines and based on auctions in the North of England. If you live in the South prices are higher.

Call the cops

Police forces often have goods that are recovered from raids and never get

reclaimed, eventually it gets sold off. Some go through auctions like the above, others at auctions set up by the police. Contact your nearest police station and ask what they do with their stuff. If, however, bidding isn't your style, and you don't fancy a trip down the nick, pop into your local shop, preferably a computer chain store.

Shops like these only sell goods if they are brand new and not marked, because most of us wouldn't buy one if it was damaged. But, sadly for them, sometimes their assistants - or heavens above, customers - scratch them. So, if you approach the sales staff very politely (at all times keeping your hands away from their mouths), then you could buy new kit for a good price. Most will only accept cash for this type of deal. But do be polite. Another good place for cheap kit is the government.

With cutbacks in the public services, newly upgraded buildings get closed down and sold off and there's nowhere for all the new computer kit to go. Ask your local council offices, or a friend who works in the

civil service, if they know of anything going. You could also try a major PC manufacturer.

Quite a few PC manufacturers offer upgrade services now, so an old PC can become a Pentium 100 for a fraction of the cost of a new one. Another money saving option is to grab a few friends. If you and a group of pals want to buy some kit, pool your cash and buy it all at once at the same place. If you pay by cash or debit card you can haggle off a very good discount on the lot. One reader wrote in to tell us she'd got £90 pounds off a hard disk this way. Well done, Mrs Jones.

These are just a few of the legitimate ways of getting great PC kit at a cheaper price. A fairer, price, you might even say. If you're prepared to go out of your way a little and haggle a bit then you could soon have the computer set-up of your dreams... on the cheap. (SA)

How to...

BRING YOUR PC BAC

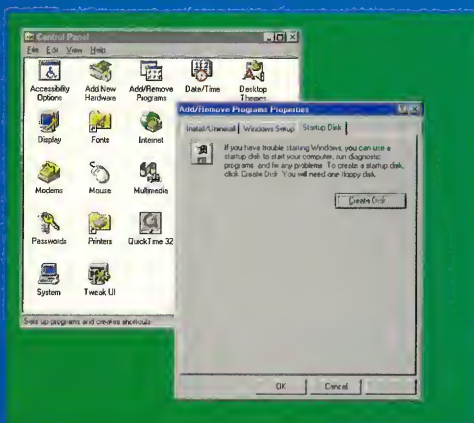
When it all turns pear-shaped don't panic, a little inside knowledge will soon sort you out. Here are quick fixes to 20 common PC woes.

PCs are remarkably reliable machines considering their complexity and the heavy use they get. But occasionally things go astray. Thankfully, most of the time you can administer the cure yourself, without going to expensive repair shops or lengthy waits while your system

is in hospital. Armed with little more than a screwdriver, a boot disk and the manuals, most jobs are within reach of everybody. Remain calm, serious hardware failure is rare, most ills are down to minor glitches and incorrect configurations rather than anything major. Don't panic.

1 SYMPTOM: YOU HAVE NO BOOT DISK

FIX: Always have a boot disk for emergencies, this will save you much grief as it can fire-up your PC when it's having problems with the hard drive or operating system. Windows 95 has a handy program which will create one for you. If you're running DOS with Windows 3.1 then type: `format a: /s` at the command prompt.



Preparing a boot disk under Windows 95. You'll find the option in the Add/Remove program section of the Control Panel under the Startup Disk tab.

2 SYMPTOM: MESSAGE SAYING SYSTEM INCOMPLETE OR INVALID SYSTEM DISK

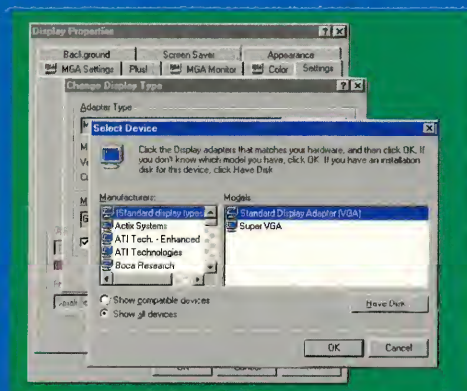
FIX: Check you haven't left a floppy disk in drive A, your PC will always check here for a disk and try to boot from it if possible. If you haven't then a vital part of the operating system is missing, boot with your boot disk, go to drive A and type: `sys a: c:.` This copies the system files across to your hard drive.

3 SYMPTOM: A WINDOWS APPLICATION SAYS COMPONENTS ARE MISSING

FIX: Have you moved the Applications directory or renamed it? PCs don't like this. Try moving it back to where it came from and/or reverting back to the original names. In Windows 3.1 you'll find .INI files in the applications directory that specify certain file paths, you can edit these using a text editor. Windows 95 is more fussy, you can end up having to reinstall the application again. But going through all that again isn't a fix, is it?

4 SYMPTOM: WINDOWS SAYS YOUR VIDEO DRIVERS AREN'T SET UP PROPERLY

FIX: Switch to standard VGA drivers and delete your existing video drivers from the Device Manager if you have Windows 95. Then reinstall the drivers that came with your card or system. If the problem persists, check to see if there are more recent versions of the drivers with the manufacturers of the card and get them to send you any new ones.



In Windows 95 you'll find standard video drivers in the Settings part of the Display Properties box. For Windows 3.1 run Setup from the Windows directory.

5 SYMPTOM: WINDOWS CAN'T FIND MY NEWLY INSTALLED HARDWARE

FIX: If Windows 95 can't find new hardware it won't install drivers for it. There are a number of possible causes but you can start by forcing Windows to load the drivers. Run Add New Hardware and click 'No' when asked if you want Windows to search for your hardware. Navigate through the lists to find the item you want. Even though it can't find it Windows may have a compatible or generic driver that will work.

6 SYMPTOM: AUDIO CDS WON'T PLAY BUT ALL OTHER SOUND EFFECTS WORK

FIX: The data from Audio CDs isn't processed by the sound card as your CD drive contains all the necessary electronics and the sound is merely passed across to the soundcard's amplifier by a little cable which is probably missing, open up your PC and check for a thin wire joining the two.



You can manually install any of the Windows 95 drivers from the Add New Hardware box. Windows has a comprehensive set including generic drivers that will work with most hardware in emergencies.

7 SYMPTOM: ERRATIC MOUSE MOVEMENT

FIX: Your mouse probably needs cleaning, turn him over and open him up. Inside you'll find tiny rollers. Hair and dirt gets wrapped around these, gently scrape off all the gunk, clean the ball and put it all back together. If it's not dirt then there's a loose connection at the socket, if you suspect the socket itself try the mouse in another serial port.

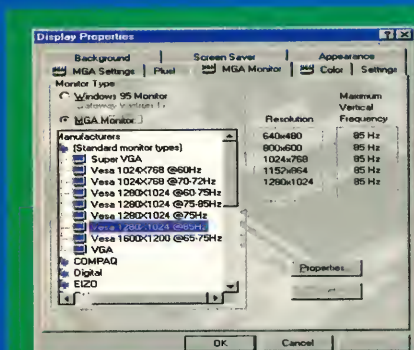
8 SYMPTOM: THE MONITOR IS A MASS OF FLASHING LINES IN WINDOWS

FIX: The refresh rate is set too high for the monitor to cope with. Interrupt the boot process by pressing [F8] and select Safe Mode. Change the resolution to a lower one and boot again. For Windows 3.1 run Setup in DOS and select standard VGA mode. Some experimentation may be called for so you can find out what your monitor can cope with. Some video card drivers come with utilities for testing resolutions.

9 SYMPTOM: SCREEN GOES BLACK WHEN RUNNING HIGH RESOLUTION GAMES

FIX: Run the game in a lower resolution, your video card probably isn't compatible with the high resolution mode used by the game. Try getting VESA drivers from either the company that programmed the game, your PCs supplier or use a shareware one. These might enable you to switch to high resolution again.

K FROM THE BRINK



Most video cards can comfortably out-perform your monitor so you have to be careful not to set the rate too high.

10 SYMPTOM: MESSAGE SAYING NOT ENOUGH CONVENTIONAL MEMORY WHEN TRYING TO RUN A GAME

FIX: Most games still use DOS complete with its archaic memory management system. Try running Memmaker, type `memmaker` at the DOS prompt, you must be in DOS mode for it to run properly not in a DOS box under Windows. This will reconfigure your system to maximise conventional memory.

11 SYMPTOM: BLANK SCREEN ALTHOUGH EVERYTHING WORKS, INCLUDING THE WINDOWS START SOUND.

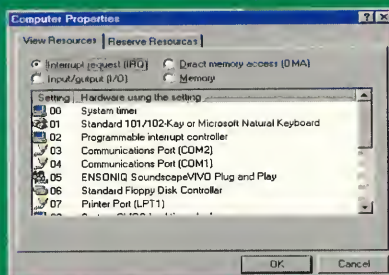
FIX: Probably a loose monitor connection, if the card was blown your PC wouldn't boot properly at all. Check the monitor and power-leads. If that fails, undo the case and ensure that your video card is seated in the expansion slot securely

12 SYMPTOM: CLASHING HARDWARE INTERRUPTS IN WINDOWS 95

FIX: Open the Device Manager and double-click on the Computer icon, this will give you a list of all the interrupts and which device is using them. Find a free interrupt number and assign it to one of the hardware devices that is clashing by double-clicking on the device's entry and click on the Resources tab. Deselect the automatic settings option and change the interrupt number. Some hardware may have the number set by a jumper on the board, check the manual to see if it needs changing.

13 SYMPTOM: CD-ROM DRIVE APPEARS IN WINDOWS 95 BUT NOT IN DOS.

FIX: Windows 95 has CD-ROM drivers but DOS doesn't, you need to install them yourself. You should have an installation disk with your PC. Boot into DOS and run the installation program. The situation is similar for the soundcard and mouse.



Windows 95 has this wonderfully useful box that details all the hardware resources used by your kit, great for tracking down a free interrupt.

14 SYMPTOM: NO SOUND IN WINDOWS

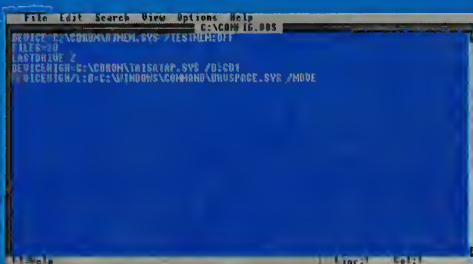
FIX: Most likely to be a driver problem, check in Device Manager for conflicts if you have Windows 95. Delete the current drivers and run the installation program that came with your soundcard. If these drivers don't work delete them and let Windows 95 install its own by running Add New Hardware from the Control Panel to install the standard Windows drivers.

15 SYMPTOM: RANDOM CRASHES THAT REPORT A PAGE ERROR

FIX: If this happens in all applications then something is up with your memory. Have you upgraded recently? If so, try checking the chips are fitted securely. If it is, try removing it, not all memory modules work happily together. You can get your memory modules tested for errors, try your local computer shop if they look as if they know their onions.

16 SYMPTOM: AN APPLICATION CAN'T LOAD A PARTICULAR FILE

FIX: Try copying the file to another location, if your PC can't read it at all then it's corrupted. Run ScanDisk over your hard drive, it may be able to save the file or you may well lose it, but you won't get the message again. The area used by that file on your hard drive will be put in quarantine.



To have a CD-ROM available without Windows 95 running you need a DOS driver, these come in two parts are loaded using your CONFIG.SYS and AUTOEXEC.BAT files

17 SYMPTOM: NEWLY INSTALLED IDE HARD DRIVE FAILS TO APPEAR ALTHOUGH IT POWERS UP OKAY

FIX: If fitted to the same IDE cable as your existing drive your new drive must be set to be a slave drive, this is done by moving a little jumper on the drive itself, check the manual for details. Drives come set as a master drive by default and the IDE interface supports one master and one slave.

18 SYMPTOM: MESSAGE SAYING HDD CONTROLLER FAILURE

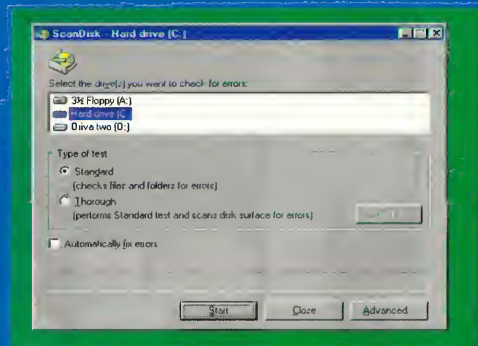
FIX: Your PC can't read your hard drive at all. Have you moved or knocked your PC recently? The cause is usually a loose cable, undo the case and ensure that both ends of the IDE cable and the power lead are firmly in place.

19 SYMPTOM: THE CLOCK IS DEFAULTING BACK TO THE SAME DATE EVERY TIME YOU BOOT UP

FIX: The little battery on the motherboard that holds the time is getting low on juice. You need to fit a new one soon before more important configuration information is lost, check the motherboard manual for the type needed and go out and buy one.

20 SYMPTOM: A SERIES OF BEEPS ON BOOTUP AND NOTHING APPEARING ON THE SCREEN

FIX: Sorry, but this time you're in real trouble. A fundamental part of the system isn't working. Open up the case and ensure that the memory, processor, power supply to the motherboard and the video card are all seated firmly. If so boot again and write down how many beeps you're getting and their timing, they're coming out in a sort of code that you'll need a real expert to decipher. Ring your PC's supplier, they should know what each error code means and be able to diagnose the fault. Only then will you be able to remedy it. (CL)



ScanDisk is an invaluable ally, it checks the integrity of the file structure on your hard drive and the disk itself. It's worth running it to check your drive whenever you have mysterious disk problems.

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013130 500000

01

CD REVIEW

Daggerfall THE ELDER SCROLLS

A vast demo of a vast game.
That's our playable version of Daggerfall.

Without doubt the most delayed released in the history of the PC, *Daggerfall* is also one of the most ambitious games ever produced and is simply vast in its scope.

Daggerfall is the sequel to *The Elder Scrolls: Arena*, and like its predecessor is a fantasy role-playing game in which you take on the role of a character who is sent on a mission by the Emperor to bring peace to the realm of *Daggerfall*. Our fully playable demo includes many of the features of the full game, and should give you some idea of just how much depth there is to *Daggerfall*.

Once you've installed and started the demo, you must first create your character.

The full character generation process is included, allowing you to pick your race and class – either selecting one of the pre-made options, or creating your own from scratch. The custom class option lets you define everything about your character's profession, allowing you to create exactly the type of hero you want to play in the game. You can select the class' important skills, which in turn determine what your character will be good at, pick special advantages and disadvantages, and even alter how the different types of people you'll meet feel about you. We suggest you experiment here.

Once you're happy, it's into the game itself. The demo is set in one complete

dungeon, but includes several features that only appear in towns in the finished game. As well as exploring and fighting the evil denizens of the underground complex, you can design your own unique spells and magic items, and even create potions.

Remember that at most points in the game, right-clicking will bring up help on the object selected, and pressing [Esc] will take you to the options screen, which includes a full list of the keyboard commands. You can also choose between two mouse control methods – cursor and view. Although the cursor interface is the default, we suggest you give the view interface a try as it's the same flexible system used in *Quake* and *Terminator: Future Shock*, games you're probably already familiar with.



Strange crustacean beast mark 1: it descends upon you, but only in the full game.



Strange crustacean beast mark 2: also from the full game, this one walks sideways.



Death is only a temporary state of being in *Daggerfall*. And levitation is easy.

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From: Virgin Interactive ☎ 0171 368 2255 Minimum system: 486/66, 8Mb, Win 95



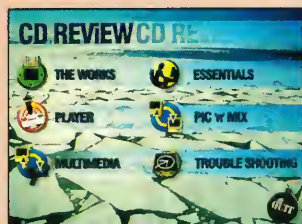
Getting started

Winter is here. The roads are covered in ice. Windows are coated in condensation and the ice floes are sweeping across the Antarctic. To match the season, our CD REVIEW interface also features some wintry ice, but you can be sure it's not frigid. In fact, we think it's hot.

Featuring two separate menus for Windows and DOS, it aims to be all things to all PC users. Before you run our menu, it's a good idea to quit from any other programs that are already running. Here's how to get the menu you want up and running:

Windows users

If you're using Windows 95 then pop the CD in the drive, wait a few seconds and the Windows 95 menu autoruns. This feature is



It's freezing! Thank the heavens for our Winter menu.

not supported on all machines, so if nothing happens click on Start, then select Run. Use the Browse option to locate the file REVIEW.EXE, and you're into the action.

If you're running Windows 3.1, click on File, then Run, then use the browse option to select the file REVIEW.EXE. Double click the file name to start the menu.

Our Windows menu is split into five sections, the contents of which are described in more detail on the following pages. To get to a section, click on its icon on the main screen and use the arrow keys to get to demos.

You'll notice that we've also included the Troubleshooters guide on the front end. Should help you sort any problems out.

DOS Menu

Even in these enlightened times, many games require DOS to run, so you'll find most of this month's in our DOS menu. Type PCR or GO at the DOS prompt of your CD-ROM drive. Once the DOS menu is up and running use the arrow icons to scroll through our demo selection.

JETFIGHTER III

Head straight into some argy-bargy with this fully flyable demo of *JetFighter III* from Mission Studios. According to the storyline of *JFIII* those warmongering Argentinians just can't keep their paws off other people's territories. This time they've invading that peace-loving enclave of Latin American liberalism, Chile. So it's up to you and your trusty F-22 – the global order enforcer – to take off from a UN aircraft carrier and give them what for in this four mission taste of the action.

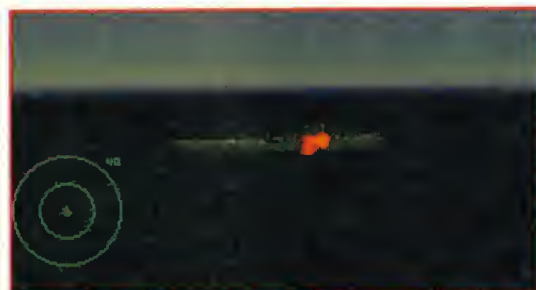
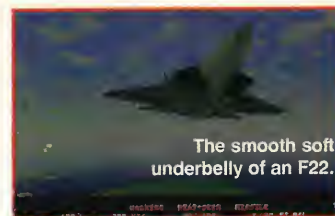
Mission one drops you straight onto the tail of an Argentinian Mirage. Lock-on and paste him all over the mountain side ASAP, as your wingmen won't last long and there's a vital-to-the-war-effort power generator just begging to be filled with Maverick missiles. On to mission two and you're up against a challenge more deadly than any

bogies... your own aircraft carrier. As it pitches and chops on the waves, you've got to kiss the deck in a manoeuvre that makes docking in *Elite* look like parking your backside on the sofa. For the best chance of survival, point the plane straight at the carrier and eject gently onto the deck just as your multi-million dollar aircraft slams headlong into the bow. Hey, it's the price of war.

Mission three is a straight dog eat dog fight as you skim the waves protecting your convoy from an all-out air attack. Chuck out flares and chaff like a flatulent swine in a baked bean factory and if that doesn't work, then it may be time to

peruse the indestructible aircraft options.

Finally take a breather with mission four, a serene Mach 2 guided tour of the Andes that gives you just a sniffer of the forensically mapped, three and a half million square miles of scenery in the full game. Then do all four missions over again in the F/A 18, the alternate plane in the demo.



I'm afraid you haven't passed Mr Smyth. You failed on the correct use of mirrors and smashed to bits on the deck.



Cover your wingmen, or alternatively let them burn.

From: Eidos Interactive ☎ 0181 780 2222 Minimum system: P100, 8Mb RAM, 38Mb hard disk space

ALIEN TRILOGY



Whenever cornered and in the dark, light the place up with gunfire.



Destroy the barricades with the shotgun to complete the mission.

Dust down the trophy cabinet, load the elephant gun and prepare to bag some bug-eyes in Acclaim's cracking *Alien Trilogy* demo. It would seem your fellow marines have already watched the films however, as they've sent you (as the smallest squad member) in first, on a very special mission to, erm... clear out some important barrels, yes that's it... and er, mind how you go. So as something of an Elmer Fudd of *Doom*-'em-ups you set off on your bug hunt, "Shhh. I'm hunting aweins."

Press [Space] to open doors and soon, like so much alien bait, you'll be wandering a labyrinthine hellscape, waving your 9mm in front of you to ward off evil. With nothing but your motion tracker for company, pinging faster than the late Benny Hill's pacemaker, it won't be long before you're screaming, "Have some of this!" at the shadows and pumping 20 rounds into the soft furnishings. You could have sworn they moved. Give it a minute though and you'll be in the thick of mission mayhem, with face fuggers trying to embrace your visage like a long lost brother. Nail them to the wall or endure a stomach churning chops-latching scene. And keep those alien mommas at a distance too – acid scars can be hell to shift.

Scoot about the level picking up ammo and medi-kits and keep 'em skinned for the shotgun. It's the only way to clear the barrel barricades and the only language xenomorphs understand. Finally one last alien-handling tip: do not touch.

From: Acclaim ☎ 0171 344 5000 Minimum system: 486/66, 8Mb RAM, 23Mb hard disk space

SANDWARRIORS

Encourage impressive neolithic peoples to worship you as a god, by riding about the ancient Egyptian skies of 6225 BC in your sky chariots that breathe fire. Such is the way in *Sandwarriors* the high speed 3D shoot-'em-up from Gremlin which has you dogfighting around the Pyramids in futuristic spaceships.

Although you'll be backseat driving in this interactive preview, just kick off your shoes, relax and pour yourself a light aperitif before feasting upon the stunning visuals as you're taken on a whistlestop tour of all the main *Sandwarrior* sites of interest. Namely, its huge desert arena full of Bladerunner-style sandcastle cities, seaports shimmering like jewels upon the Nile, skyscraper scale motherships, and plenty of state of the art hardware lovingly rendered with an Egyptian



Prepare to add another House of Set dog to your kill tally.

theme. *Sandwarriors* revolves around an apocalyptic war, fought between the forces of House Osiris and their sworn enemies at the House Set, desperately battling over

possession of the ancient doomsday weapons of Orion. As such it contains some pretty heavy metal which you can check out in the demo. Like a most favoured customer of Honest Abdul's Quality Used Arms Dealership you'll be treated to a performance presentation of some of the juicier tools of the game, so you can examine their specs for yourself. Feel the quality, Sir, observe the craftsmanship. The completed game should include over 20 vehicles and 10 guns ranging from the impolite chain gun to the downright obnoxious nuclear warhead.

From: Gremlin ☎ 0114 275 3423 Minimum system: 486/66, 8Mb RAM

THE GAME FACTORY



Work in progress – another fiendish level.

Games writing – money for old rope, eh? Knock off a few lines of code and buy a Porsche on the proceeds, right? Well, maybe it's not that simple – but it just got a whole lot easier with *The Game Factory* from Europress. And you can see for yourself just how easy it is with the stunning demo on CD REVIEW.

From multi-scrolling shoot-'em-ups to platform adventures, *TGF* puts you at the sharp end of games creation. With an assortment of backgrounds, animated characters and special effects the demo offers a hands-on taste of the full product, which teams with a wealth of graphics and routines to get you up and coding before your monitor's had chance to warm up. The demo is save-disabled, and runs from versions

of Windows 3.1 up. And while it includes only a small sampler of goodies on offer, it should give you a taste for masterminding your own game. The *Games Factory*'s help system is a major feature in the release version, though the software goes all-out to be user-friendly, with complex coding reduced to a stunningly intuitive point and click interface.

It's never been easier to control on-screen characters. The software takes care of all the hard stuff – like animated sprites and collision detection. You just have to work out what happens when events occur. And this is where you have to help the computer along a little. The *Games Factory* is great at taking the hassle out of games creation, but it needs your ideas to work at all.

From: Europress ☎ 01625 859333 Min System 486 8Mb RAM, CD drive, Win 3.1 or 95

VIRTUA COP

Did I shoot six shots or was it only five? You know, in all the excitement I kinda lost count myself. *Virtua Cop* is a faithful reproduction of Sega's coin-op gun-'em-down, normally found in beach front arcades complete with plastic uzis for trimmings.

But you won't find yourself going "Ugh" in this demo, as you take a firm grip of the trigger only to find it gummed up with candyfloss, as all the gun-toting action is surprisingly well-controlled with your mouse. CD REVIEW brings you a single mission demo that takes you down to the docks, where you'll meet van-loads of *Reservoir Dogs*-styled thugs.

And, it's got polygon looks to die for, as you pop scumbags through a

kill-zone of storage containers and warehouses. You don't control physical movement, but you'll have your hands full anyway trying to draw a bead on gangsters leaping out of trucks, sniping from high ledges and sneaking pot shots from behind their human shields. Do try to avoid grazing the hostages, as you're sworn to protect the citizenry and you'll be docked a life. The most important thing is to keep a count of how many rounds you loose off, as you've only got a six-bullet chamber and there's nothing villains like more than to tag you while you're reloading. And if you're not such a Dirty Harry loner, then try Cagney and Lacey style shennanigans, with a partner for some top buddy-buddy two player action.



Flairs are dead and so will you be if you don't reload. Only two bullets left in the chamber.



Quentin pulls some moves straight from the *Reservoir Dogs* School of Dance. Oooh, he likes ta boogy.

From: Sega ☎ 0181 995 3399 Minimum system: Pentium, 16Mb RAM, 33Mb hard disk space

THE QUAKE COLLECTION

Another issue, another bunch of dark beasts and despicable Quake levels from the flipside of the Internet dream. The star pick in this month's selection just has to be Tim Thomson's *PhatSplat_v111P*. It's the ultimate collection of patches and upgrades including new kit like motion sensors, laser sights, and grappling hooks and new hand-to-hand attack moves, including kicks.

As usual, you'll find new levels too. *Fragyard* is one enormous deathmatch killing zone whilst *Goblin* replaces the grunts with irritating squeaks. DeathMatch players will find an unusual arena in *Break009*. Single players should investigate the Altar of Pain (*tcf_aop*). The Interdimensional Intelligence Agency has located a hideous demonic chapel, inhabited by shamblers, and you've been sent to destroy it.

Remember, these patches can only be used with the registered

game, not the shareware version. You'll need to have some familiarity with copying files, creating directories and other Windows operations in order to use them.

Before you can use a patch, unzip it with Winzip. You'll find this in Essentials on the coverdisc. All the patches and levels include text files; read 'em.

Generally, to use a patch you first create a new directory in the *Quake* folder. Then, copy the patch into the directory and unzip it with Winzip. Finally, launch the game by typing *quake -game xxx*, where *xxx* is the name of the new directory.

To use a new level, make a directory called Maps in the *Id* directory in the *Quake* folder. Unzip the new level into it and then run *Quake*. To access the new level, go to the *Quake* console and type *Map xxx*, where *xxx* is the name of the new level.

From: Various authors Minimum system: 486, 8Mb RAM, full version of Quake

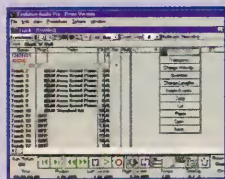
THE WORKS RSA SecurPC

This utility lets you quickly and easily encrypt files and directories on your hard disk, floppy disks, and network drives. Note: BE CAREFUL! Don't forget your password or you'll be unable to decrypt your data, permanently! RSA SecurPC also lets you send encrypted files attached to email. They'll be able to read the email even if they don't own RSA SecurPC. See page 118 for further info.

From: RSA ☎ www.rsa.com Minimum System:n/a

Evolution Audio Pro

Combining digital audio and MIDI recording in one handy package, the latest version of *Evolution Audio Pro* also includes an instant chord generator, and enables your music to be accompanied by a choice of 16 styles. Other features includes multiple stave editing, lyric entry and a Karaoke Screen. This is a save-disabled demo.



Make your PC sing with Evolution Audio.

From: Evolution Electronics Ltd ☎ 01525 372621

PICK 'N' MIX

Three comms utilities to try out – *SurfSilly*, *ViaTalk* and *SuperCharge*.

You'll find a superb collection of internet programs in this month's Pic'n'Mix. First off is *SurfSilly*, a retractable toolbar for adding and accessing your favourite Web pages with your browser. *SurfSilly* automatically adds links by communicating with *Navigator* or *Internet Explorer*.

When you're bored with surfing try out *ViaTalk*. It turns your computer into a powerful Internet server, capable of up to 25 connections with other users, or you can connect to them. Features include private chat rooms, group Web surfing, and paging.

After all that Internet chat you'll probably be wondering how much it's all going to cost you. This is where *Super Charge* comes in useful. It works out how big your phone bill is going to be, based on how long you've used the Net for. You will need a copy of VBRUN300.DLL in your WINDOWS\SYSTEM directory for the programs to work. You'll find it in the root directory of our CD.

From: Thompson Partnership ☎ 01889 564601
Minimum System: 486, Windows, modem

MULTIMEDIA

Nickelodeon 3D Movie

3D Movie Maker gets a new lease of life. Our cut down version allows you to control the destinies of cartoon heroes Ren and Stimpy. They will perform a variety of tasks at your command. To start, select the background by clicking the mouse on 'scenes' and then on the street. Now click on the actors button, select the pair of eyes and choose your actor. Position the characters and choose what they're going to come out with. Hey presto.



The scary world of Ren and Stimpy with Nickelodeon 3D Movie Maker.

From:Microsoft ☎ 0345 002000
Minimum System: Windows 95

The Magician

Ever wanted to study magic? Close up to try and figure out those time honoured tricks? Help is at hand, with our exclusive demo of Telstar's new CD-ROM *The Magician*. This preview enables you to view three coin tricks, performed by master magician Keith Fields. The catch is that you'll have to buy the full disc to find out just how he did them! Cheesily enough the PC will even perform a trick for you – predicting the year of your birth. To witness the miracles magical silicon (no really) select 'Computer Tricks' from the main menu. See page 90 for review.



The adoration of your peers can be obtained with The Magician.

From:Telstar ☎ 01932 222232
Minimum System: 486, Windows 95, 8Mb

Ordanace Survey

Now, Ordnance Survey, the leading cartographic firm in the UK, is taking the concept of the map into the next century with a new interactive atlas. This demo shows, in great detail, where the small country town of Hexford is – somewhere in the West Midlands in case you're wondering – and then proceeds to play about with the map no end. All by itself. Amazing. You are restricted to viewing this demo, but find out more about the full product on page 88.



Look, there it is! Hexford. Told you so.

From:Atica ☎ 01908 570119
Minimum System:486, 8Mb Ram, Windows

Picasso

In simple laymans terms Pablo Picasso was just a balding genius that looked a bit like Victor Meldrew and painted complete madness. That doesn't mean we don't like him though. Last month we gave you the review of this multimedia tour of Picasso's life and work and now we present this exclusive demo.

You enter the program at the main screen, laid out like an art gallery. Clicking on different paintings leads to different periods of the life of Picasso but here you are restricted to the early stuff. How does the work of the eight-year-old Pablo grab you.



The man and his most famous painting – Guernica.

From:Grolier ☎ 01865 245770
Minimum System:DX2/66, 8Mb, Windows

Oddballz

Following in the pawsteps of *Dogz* and *Catz* is *Oddballz*, a playpen full of furry and scaly freaks who'll be your friend and frolic on your desktop just as long as you tickle their tums and feed them fat juicy grubs.

This starter kit shelters one of these beasties and should be enough to win you over. Hatch an egg and you'll get a Walrut. Pet his belly and he'll roll with delight; give him a toy and he'll scamper for joy because he just loves to play fetch. If you dangle a tasty grub in front of his nose, you can teach him tricks. And remember, no animals were harmed in the making of this demo.



If your Walrut lives to eat slimy grubs. What a treat.

From: Mindscape ☎ 01444 246333
Minimum system DX/66, 8Mb, Windows

Creatures Xmas Kit

Well now, you've enjoyed all the pleasures of the Holiday Season. You gave the dog a bone, and the cat got a new flap, but what did you give your Norns? Nothing, right.

No need to feel guilty, with the *Creatures Christmas Kit* you can give your A-life critters all the traditional holiday gubbins. There's a snowman, a reindeer, a pudding, holly and, best of all, a Santa Norn. Instructions on how to insert them are on the read me in our interface. Also included is a text file of the *Complete Guide to Creatures*.



Santa Norn is comin' to town. Sing it folks, your Creatures will love it.

Warner ☎ 0171 391 4300
Minimum System: Pentium, 8Mb, Creatures

WIN A PRINTER!

You'll see for the first time ever, that CD REVIEW features an advert - it pops up as you quit out of the disc and can be skipped. We'd like to know what you think of this innovation - and to encourage you to write in Epson is offering an Stylus Color 500 printer. All you need to do is complete the following sentence 'There's no...' The answer is hidden in the advert on the disc. Answers by February 15 please. First out of the hat on the closing date wins the prize. Should you not wish to enter the compo, but still have an opinion on the ad, then write to



us anyway. Ads on the disc are a new thing for us and we need to know what you think. Write to: Epson Ad, PC REVIEW, Future Publishing, 30 Monmouth Street, Bath, BA1 2BW.

Resolutions...



See page 33 for our guide to using the New Year Resolution collection of 10 full pieces of software.

- IMSI EZ Language
- Digita Organiser 1997
- HoTMetaL Lite
- Photo Plus 1.0
- Introduction to Visual Basic 4.0
- MoneyBox 4.1
- Imagine 4.0
- Complete Works Lite
- Teleshare 3.0
- Evolution MIDI

Essential Selection

A whole stack of vital tools are filed under the PC Essentials section of our menu.

Direct X

Developed by Microsoft, DirectX increases the speed of graphics and sound processing under Windows 95.

Video

Run-time versions of two video players: Quick Time for Windows 2.03 and Video for Windows 1.1.

Graphics

Paintshop Pro is our favourite graphics utility. You'll find both Windows 95 and Windows 3.1 versions on the disc.

Compression

With Winzip, you can free up hard disk space and also shift bytes on-line for less money.

Win32

A lot of Windows 3.1 programs require you to have Win 32 installed. Ta-dah! Register it if you keep it.

Troubleshooters guide to CD Review

Having a problem?

If you're having a problem with a CD Review demo we suggest you first read the corresponding entry in these disc pages. If you can see the files on your CD then the chances are that you don't have a faulty CD and may need to read through the Memory section below. If your CD-ROM drive refuses to run, or read the disc, then you should send your CD to the following address and a new, working version will be returned to you within 28 days: PCR62 CD Returns, Diskpress, 7 Willow Court, Bourton Indus Park, Bourton-on-the-Water, Gloucestershire, GL54 2HQ.

Windows 95

Some DOS Games have problems running in Windows 95. We've included an option to run all the DOS games that we know work in Windows 95 from our menu, but we can't guarantee they will work on all systems. If you find you're having trouble running a DOS game in Windows 95 then try running it from our DOS Menu. First select Restart in DOS Mode from our ShutDown Menu, then when DOS has started type D:\PCR, where D is the prompt of your CD Drive.

Install and run options

Make sure you select the default installation path for all demos, otherwise when you click the Run button nothing will happen.

Memory

Configuring your PC with just the right amount of free memory can be a tricky as crossing the Alps single-handed, but don't worry, simply follow these easy tips and everything should be fine.

If you have trouble running a demo it might be because you need to free up more conventional memory. Conventional memory is the memory below 640k. Even if you have a PC with 8Mb of RAM, that doesn't mean that you'll automatically have enough conventional memory to run a CD Review demo.

To find out how much free conventional memory you have type MEM [Enter] at the DOS prompt. If the figure beside the line 'largest executable program size' is less than about 550k then you're system probably isn't set-up properly.

You can free up more conventional memory by loading the EMM386 driver, which allows you to move other device drivers out of conventional memory and into upper memory, thus freeing up more space. To add the EMM386 driver you need to edit your system files (the AUTOEXEC.BAT and CONFIG.SYS files). Make a copy of them before editing. At the C:\> prompt type:

```
COPY C:\CONFIG.SYS CONFIG.BAK
COPY C:\AUTOEXEC.BAT AUTOEXEC.BAK
```

Then, if you have any problems later on you can return to these files by typing:

```
COPY C:\CONFIG.BAK CONFIG.SYS
COPY C:\AUTOEXEC.BAK AUTOEXEC.BAT
```

To edit your system files type EDIT followed by the name of the file. The following lines should be in your CONFIG.SYS file:

```
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\DOS\EMM386.EXE NOEMS
DOS=HIGH, UMB
```

Any lines starting with DEVICE should be changed to DEVICHIGH.

In the AUTOEXEC.BAT any device being loaded should now be loaded into high memory. For example the line:

```
C:\MOUSE\MOUSE should read:
```

```
LH C:\MOUSE\MOUSE
```

These changes should result in greater free conventional memory. Another way to free up more conventional memory is to remove any Terminate and Stay Resident (TSR) programs that are automatically loaded by the system files. The following lines are not essential for using CD Review. If you see them in your system files, disable them by putting REM at the start of the line.

In Config.sys you may want to rem out any line containing SMARTDRV.SYS, DISPLAY.SYS or COUNTRY.SYS.

In Autoexec.bat you could remove any line containing SMARTDRV or DOSKEY and any line that loads a memory resident virus checker.

You can return your system to its previous state by removing the REM commands, then rebooting your system. Remember any change to a system files will not take effect until your system has been rebooted.

EMS Memory

Some PC games require EMS memory rather than XMS memory. To configure your PC for EMS memory change the line in your CONFIG.SYS reading:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS to:
DEVICE=C:\DOS\EMM386.EXE RAM
```

and reboot your machine for the changes to take effect. You will probably have to change back to XMS memory by reversing the above change for your other programs to work.

DirectX

DirectX is a series of drivers developed by Microsoft to increase the speed of graphics and sound processing under Windows 95. In particular, games and multimedia applications demand the fastest possible display performance. The drivers are still in development however, and there have been reports of DirectX overwriting default graphics drivers and thus crashing Windows 95.

If, after running a DirectX demo from CD Review, you experience graphics problems when restarting Windows 95, you will need to restore the original drivers. To do this:

1. Shut down your PC.
2. Restart Windows in safe mode. To do this, press F8 when your PC reports it is 'Starting Windows 95'. Then select 'Safe Mode' from the menu
3. At the desktop, insert the CD Review disc. Press Start and then select Run from the Taskbar.
4. At the prompt type D:\DIRECTX\DXSETUP.EXE (where D: refers to the letter of your CD drive).
5. The DirectX set-up program will now appear. Select 'Restore Windows 95 Drivers' to return your PC to normal.

We should add these are problem are rare, and they should not put you off enjoying the contents of CD Review.

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Disclaimer

CD Review is thoroughly checked for all known viruses, and independently certified before duplication. While every care is taken in selection, testing and installation of CD Review, Future Publishing cannot accept responsibility for loss or damage occurring during its use. You are strongly advised to have recent, verified back-ups of all important files before installing any new software.

Support

If you need help getting a demo to work then phone our technical support line on 01225 442244 and ask for Trevor Witt. Better still, e-mail him on support@futurenet.co.uk.

RUNNING PROGRAMS MANUALLY

Windows 3.1

To run a program manually using Windows 3.1 select File from the Windows Program Manager menu, then select Run from the pull-down menu. Use the Browse option to select the directory, and then the file. Double click on the file name to run it.

Windows 95

Using Windows 95, click the Start button from the menu bar, then select Run. Use the browse option to select the directory, and then the file.

DOS

Type CD followed by the directory name at the DOS prompt of your CD-ROM drive, then press [Enter]. Finally, type the name of the file and press [Enter].

Here's a list of the executable files you need to run (assuming your CD-ROM drive is D:)

Program directory and filename

Alien Trilogy
D:\PLAYER\ALIEN\INSTALL.BAT

Complete Works 2.0
D:\WORKS\CW\SETUPEXE

Creatures Christmas Kit
D:\CREATURE\CREATURE

Daggerfall
D:\PLAYER\DAGGER\INSTALL.BAT

Digita Organiser
D:\WORKS\ORGANISE\SETPEXE

Evolution MIDI
D:\WORKS\MIDI\SETUPEXE

Evolution Audio Pro
D:\WORKS\AUDIO\EVAPDEMO.EXE

EZ-Language German
D:\GERMAN\SETUPEXE

EZ-Language Spanish
D:\SPANISH\SETUPEXE

The Games Factory
D:\TGFDemo\SETUP32.EXE

Jet Fighter 3
D:\PLAYER\JF3\DEMO\INSTALL.BAT

Magician
D:\MAGIC95.EXE

Moneybox
D:\WORKS\MONEY\INSTALL.EXE

Nickelodeon 3D Movie Maker
D:\MM\NICK3DL.EXE

PhotoPlus 1.0
D:\INSTALL.EXE

Picasso
D:\PICASSO\PICASSO.EXE

Programming In Visual Basic
D:\VB\SETUPEXE

RSA PC Secure
D:\SECURITY\SECUR95\SETUPEXE

SandWarriors
D:\DEMO.EXE

SurfSilly
D:\WORKS\SURF\SETUPEXE

Super Charge
D:\WORKS\CHARGE\SETUPEXE

T3
D:\T3\T3.PDF

TeleShares
D:\WORKS\TEL\SETUPEXE

Turnpike
D:\TURNPIKE\SETUPEXE

Imagine 4.0
D:\WORKS\IMAGINE4\INSTALL

ViaTalk
D:\WORKS\VIA\SETUPEXE

Virtua Cop
D:\VCOP\SETUPEXE

THE LAW

1. Answers please on the form or a photocopy of it.
2. Post your entry to Eye to Eye, PC Review, Future Publishing, 30 Monmouth Street, Bath, BA1 2DL.
2. Don't forget to put your name and address on the entry and get it to us by 15 February 1997.
3. This competition is not open to employees of Vivitar, White Pine or Future Publishing.
4. No multiple entries.
5. No correspondence will be entered into over the results of the competition. The judge's decision is final.

EYE TO EYE

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REQUIRES
Modem 28.8kpbs recommended

Video phones seem like one of those technologies that's only a tomorrow away. Something that we all saw on *Tomorrows World*, back when *Doctor Who* was still good, and were led to believe we'd all be using by the year 1980! Who would have thought that we'd still be making do with aural sensations delivered via greasy handsets, when we could be ogling those unshaven morning chins or the caught-you-in-the-shower drips of our interrupted friends.

Now, your time of waiting is over. *Doctor Who* may have fallen by the wayside, but your PC can turn the dream of visual telephony into a reality. We're giving away Internet cameras!

Vivitar is best known for its cameras, binoculars, flash guns and other photographic accessories, but its just cut the ribbon on a new

electronic and digital imaging division. Scanners, photo printers and digital cameras are all on the way, but in the meantime you lucky lot can make do with these gadgets. They go by the monicker of MPP – which stands for Motion Picture Phone. You don't have to be connected to the Internet to send and receive video phone calls, but you do need to be speaking to someone with similar hardware. So we've persuaded Vivitar to stump up two pairs each for two lucky winners to be.

The model Vivitar is offering is the MPP2i, which offers the option to use on-line services as well as person to person communication. You can use regular phone lines or connect via the Net. For on-line communications you'll need extra software to compress the signal, and rather nicely White Pine, which makes such software has agreed to give away four copies of its *CU See Me* package worth £49.95 each. The recommended retail price of the MPP2i is £269. So what are you waiting for? Fill out the form and hitch a ride to *Tomorrows World*.

Complete the following sentence in 25 words or less.

- If I owned the Vivitar MPP2i I would call...

.....

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- Tick here if you do not wish to receive information about other Vivitar products. ☐

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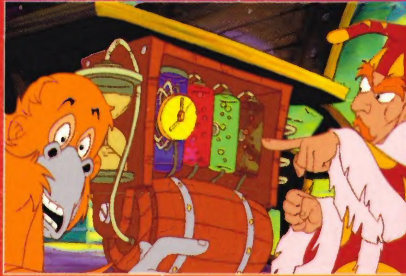
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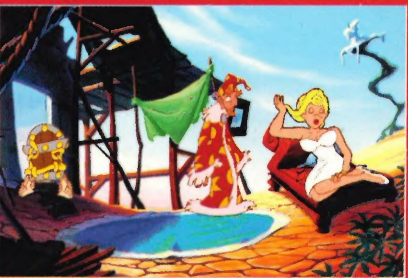
**AND THE NATIVES HANG OUT
IN THE WEIRDEST PLACES.**



**WHERE THE COCKTAILS ARE
LETHAL.**



AND THE FOOD SUCKS.



**THEN YOU MEET A
GORGEOUS BABE,**



**WHO FALLS UNDER YOUR
SPELL,**



**AND THINGS ARE LOOKING
GOOD.**

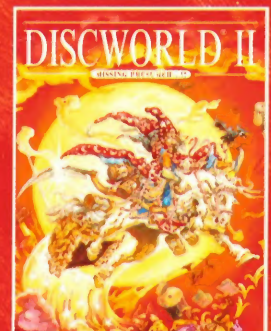


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